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NATURE NOTES,

THE SELBORNE SOCIETY'S MAGAZINE

5.06(42)M

EDITED BY

G. S. BOULGER,

F.L.S., F.G.S.,

Professor of Botany and Geology, City of London College.

HE PRAYETH BEST WHO LOVETH BEST
ALL THINGS BOTH GREAT AND SMALL;
FOR THE DEAR GOD WHO LOVETH US,
HE MADE AND LOVETH ALL.

London:
JOHN BALE, SONS & DANIELSSON, LTD.,
83-89, GREAT TITCHFIELD STREET.

SELBORNE SOCIETY, 20, HANOVER SQ.

Vol. XII. 1901.

20 8135 3 Mar

JOHN BALE SONS.
and DANIELSSON Ltd
68 TITCHFIELD STREET
LONDON.

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No. 133. JANUARY, 1901. Vol. XII.

SELBORNIANA.

Glover's Island.—It is undoubtedly a subject for congratulation that Glover's Island has been purchased and presented to the Corporation of Richmond. It will be remembered that one of the loveliest views in the world was threatened not long ago with ruin, by a proposal to allow a large advertisement hoarding to be erected on this little Thames eyot.

Physical Laboratory.—It is announced that Bushey House, Hampton Court, formerly occupied by William IV. and by the Duc de Nemours, is being converted into a laboratory in connection with Kew Observatory, to which all the work of the observatory is eventually to be transferred. This will presumably remove the chief argument against the electric tramways projected in the Kew district. We trust it also means the abandonment of the scheme for a laboratory in the Old Deer Park.

Reprehensible Shop "Decorations."—Many protests have appeared of late in *The Standard*, *The Daily Graphic*, and elsewhere, against the altogether needless sacrifice of squirrels and of many kinds of birds, wholly valueless as food, for purposes of advertisement or "decoration" in poulterers' shops. One correspondent enumerates the great northern diver, crested grebe, dabchick, several species of gulls, cormorant, heron, kingfisher, green woodpecker, great spotted woodpecker, long-eared, tawny and barn owls, kestrel and sparrow hawks, butcher-bird, greenfinch, bullfinch, goldfinch, shoveller duck, blackbird and song-thrush, as so employed. Whilst, as Canon Rawnsley implies in a letter to *The Standard*, it is desirable to strike at the root of this evil, at the thoughtlessness which

thus squanders the beauties of nature, by educational methods, such as bands of mercy, many other correspondents naturally suggest the more immediate check of legislation. It may also be suggested that a remonstrance from customers is more likely to receive attention than any other.

The Christmas Card of the Society for the Protection of Birds.—Mr. Norman Gale, the "Laureate of the Birds," has written the verses for a card entitled "Feathery Harps," issued this Christmas by the Society for the Protection of Birds. It is illustrated by a photograph from life of blackbirds in the nest. It can be obtained from the Honorary Secretary, 3, Hanover Square, for 3d., or 2s. 6d. a dozen.

"The Birds of Yorkshire."—Naturalists and others interested in the subject will be pleased to learn that arrangements have been made for the speedy resumption of the publication of Mr. W. Eagle Clarke's excellent work on "the Birds of Yorkshire," which has been partly published in the *Transactions of the Yorkshire Naturalists' Union*, and the continuation of which was interrupted by Mr. Clarke's leaving Yorkshire to settle in Edinburgh. Mr. Clarke and the Yorkshire Naturalists' Union have now been able to secure the services of so able and competent an ornithologist as Mr. Thos. H. Nelson, M.B.O.U., of Redcar, to continue and complete the task. Mr. Nelson has now in his possession the voluminous mass of original and unpublished observations which Mr. Clarke had at his command when writing the instalments which are already in print, and which includes notes, lists and observations from most of the naturalists who have studied and observed Yorkshire birds. In addition to this is the whole of the information amassed by the late Mr. John Cordeaux relating to the birds of the Humber district, and also the large amount of notes which Mr. W. Denison Roebuck has extracted from the very voluminous literature of the subject, and Mr. Nelson's own accumulated series of notes on the birds of Cleveland and other districts, the whole forming an ample mass of material for the purpose. Mr. Nelson will also be pleased to enlist the co-operation of those who have it in their power to assist him with notes on Yorkshire birds, their history, distribution, migration, nidification, variation, vernacular nomenclature, &c. All assistance will be duly and gratefully acknowledged. Mr. Nelson is now actively at work on the families *Turdidæ* and *Sylviidæ*, which is to be included in the next instalment sent to press.

Crystal Palace Natural History Tableaux.—Mr. Shrubsole, the energetic curator of the Natural History Department of the Crystal Palace, announces that, with the assistance of Mr. John England and others, he has now completed a series of ten realistic tableaux illustrating animal life. Upwards of fifteen hundred animals, including "Charlie," the elephant who

came to a tragic end at the Palace a year ago, are incorporated in these groups.

Our Index.—It should have been stated in our last number that the Society is indebted to Mrs. Percy Myles for the preparation of the index to the year's volume of Nature Notes.

LOCAL CORRESPONDING SECRETARIES AND THEIR WORK.

By the Editor.

THE notion of the Council in proposing to appoint Local Corresponding Secretaries seems to require some explanation. Where branches of the Society already exist it is presumed that there is sufficient means of communication with the Council on matters of Selbornian interest. If any topic arises on which it is desirable to arouse public feeling throughout the country, the Council naturally communicate with the Branch Secretaries; whilst if some local building of antiquarian value, some beautiful piece of local scenery, some neighbouring right of way, or some rare or interesting local species of plant or animal, is threatened with destruction, the Branch, through its Secretary, can readily enlist the sympathy of the entire Society. What can be done in this way where a Branch exists, it is desired to accomplish as far as possible in other districts, pending the formation of a Branch.

It may safely be asserted that in every Natural History Society or Field Club in the three kingdoms there is at least one member whose interest in animated nature is of a humanitarian even more than of a purely scientific character; one who is at heart a Selbornian though he, or she, may be ignorant of the existence of the Selborne Society. Such persons it is desired to reach, to unite and to support as missionary centres for the spread of our principles. At the same time, without in the least wishing to put a stop to intelligent and reasonable collecting for purposes of study, we recognise that there is in many such societies a danger of the mere passion for possession leading to such wholesale and indiscriminate collection, especially of rare species for purposes of exchange, that some such check as the occasional advocacy of Selbornian principles by lectures, or by mere comments in the course of debates is most desirable.

Whilst the Selborne Society is naturally desirous of strengthening itself by enlisting new subscribers in all parts of the country, it does not want to withdraw support from local societies. All it proposes, in places where there is no Branch, is, therefore, that the local society should nominate from among its own members some one who should act, under the title of

Local Corresponding Secretary of the Selborne Society, as a channel of communication between that Society and local naturalists. NATURE NOTES, from month to month, will keep the corresponding secrerary *au courant* with the immediate direction of the Selborne Society's energies, and it is hoped that the magazine, which will be sent *gratis* for at least a year, may be brought under the notice of the members of the local society. On the other hand the Council of the Selborne Society and the Editor of NATURE NOTES will always be glad to hear of the doings of the local societies and to do all in their power to assist them in any undertakings conducive to the preservation of natural beauties and the loving study of the world around us.

It is not desirable that the relations between the Selborne Society and the Local Corresponding Secretaries should be hampered by any formal rules, but it is obviously essential that the Secretary (A. J. Western, Esq., 20, Hanover Square, W.) should be at once informed of the name and address of the Local Corresponding Secretary nominated by any Society that has been invited to appoint one.

AD MISERICORDIAM.

IT is an appeal to Christ's teaching of mercy that I make in drawing the attention of the members of the Selborne Society to the following matters. Let us hope that the new century upon which we are entering will be signalised, amongst other things, for an increase of love and care for all innocent and beautiful life, that the century that follows on may bless and not curse us.

First, about the "murderous millinery." One saw with regret last month in the Paris windows that, though riband trimmings for hats and toques were more abundant, and though it was evidently thought a little less savage to put a wild beast biting its own body, round the throat of a fair woman than to decorate her head with dead humming birds, there were, nevertheless, a good number of egret plumes, and plumes of birds of paradise still used for decoration, and the poor little Procne had been cruelly trapped to supply ornament to evening skirts and dinner dresses.

I do not know what particular additional charm the young gentleman at a dance can get by suddenly discovering that the girl he thought so innocently gentle and fair is little better than a bird stuffer's shop, and moves clad in the robes of death. But I am sure that the slaughter of the innocents cries to Heaven, and no one who is thoughtful can believe that such ornaments become a Christian lady. As a clergyman I have often to administer the Sacrament to people whom I know to be kind and good, in

whose bonnets or hats I am obliged to see signs not only of grave cruelty, but of gross thoughtlessness. And one urges all who know that the single tuft of egret plume, in which they come to the solemn rite, means the horrible death of parent birds at nesting time, and the bitter agonies of thirst and starvation in tropical sun for the unfledged offspring, to put away for ever, as they hope to obtain mercy, these signs of their assent to such barbarity.

It is not only the cruelty involved that torments one to think of, it is the unkindness to far generations, and the loss to posterity, that moves one. The *Ardea gracilis*, the little white Florida heron that supplies the egret plume, is going the way of the Impeyan pheasant, and the glossy-winged African starling. This murderous millinery is destroying them as it has already destroyed several varieties of our brightest-plumaged birds from off the face of the earth.

Now these birds are so many winged miracles of beauty to tell us of the glory of our God. They were sent into the world, each of them with a message from the Most High. Old Calvin knew this. Let me quote from his "Institutes of Religion:"—"For as many species of created things as there are in the world, or rather as many as there are of things great, or things little, so many miracles are there of God's power, so many proofs of His goodness, so many lessons of His wisdom."

What should we think of the lady who threw a stone at the central figure of the great cathedral east window because she thought the colour was so pretty and she wanted some of the bits of glass to wear in her hat or on her bosom. She has blasphemously destroyed something that in its beauty was setting forth a picture of God's love to man—but the window could be mended. A great crowd would probably gather and hoot her through the town, but in that crowd it is quite possible that we should see, amongst the best dressed, some who had sinned more grievously—ladies wearing the ruby plumes of some humming-bird, now quite extinct. At any rate the feather market could procure no more. And yet that ruby-breasted humming-bird, while it lived and loved, and perpetuated its species, was a true revealer of the love of God to man, and that revelation is wiped now for ever from the book of the living illuminations of God's good will, and none can restore it. This murderous millinery is then as unkind to posterity as it is cruel to the present.

Next may I ask your attention to the urgent matter of mercy in our cattle markets. You know how difficult it is to drive the timid country cattle, either to the trucking or to the mart. I daresay you also know that the cattle driver's whip or goad rains merciless blows between the horns and on the flanks of these dumb-driven scared beasts. It is not an unknown matter that a beast's eye is sometimes actually torn from its socket in the process. Now all this is bad both for the driver and the beast and the spectator and the buyer and the con-

sumer. It could all be avoided. How? By simply encouraging those who rear stock for sale, to do what is done, I think, in all Continental countries, certainly in Norway, in Switzerland, and in Austria and Bavaria, namely, train the calves to the use of the halter, and so get all grown cattle to follow a hand that leads, rather than fly from a stick that drives.

Next, I am extremely anxious that we in Britain should lay to heart one of the lessons of this terrible war in South Africa. Our losses in horse flesh have been enormous. More than 100,000 horses, I am assured, have perished. One of the contributory causes was that vicious habit and cruel fashion of docking the horses' tails. It is mercifully forbidden in the army, and so the army horses proper could defend themselves from what is the chief scourge of an African campaign, the plague of flies. But just as our volunteers and yeomen were called for, so were volunteer mounts and yeomen mounts called for. Owing to the foolish fashion of horse docking, thousands of horses had to go to the war without their natural protection, and the agonies that were added to them for want of it may be imagined.

You doubtless remember that one of the truest sportsmen of our generation, one too, of the gentlest-hearted gentlemen it has ever been my lot to know, the late Duke of Westminster, did a few years ago move at the Royal Agricultural Society's meeting "that in future no foals with docked tails should be entered for the Society's county meetings." Sir Nigel Kingscote, Prince Christian and others, vigorously supported him, but the fashion of the day was too strong for them and the Royal Agricultural Society decided against the Duke's sensible and humane proposition. I think I am right in saying that Lord Lonsdale absolutely disallowed the docking of horses' tails when he was Master of his Hunt. The custom is as useless as it is cruel, and, as this war has helped to prove, it is a dead loss to the nation. I know the stock arguments in favour of horse docking, but to those who say that the natural tail is inconvenient for harness horses I answer, "Go to Russia." We shall not easily match the skill of a Russian coachman, and I never saw a docked tail in all that splendid coronation pageant of the Czar at Moscow, nor in all St. Petersburg. I have more faith in the wise Creator of the horse than to believe that there has been any mistake about the number of caudal vertebræ necessary for the animal's well-being and comfort.

This brings me to my concluding appeal for mercy to our dumb friends. More than 100,000 horses have died for Great Britain and the Empire during this past year. We shall have monuments to our brave soldiers who come not home again. How shall we build a monument to those brave horses that have perished, horses that dropped stone dead as they pushed forward or fell in the furious battle-hail? We will build their monument and the monument of our debt to them by an appeal

to the Geneva Convention. It ought to be possible in future war to have, by some general agreement between the powers, a regular army corps of men to accompany an army on the march and battlefield, whose sole duty should be to care for the wounded and the dying horses and baggage animals, and see that the happy dispatch of a bullet behind the ear is accorded to those who fall. The matter is, I am told, a complicated one, because it is difficult to be assured that the men who would go out under a flag of truce, and who must be armed with pistol or knife, would always behave as non-combatants; but one urges that safe-guards should be sought for, which would ensure neutrality, and which would enable a clause of the Geneva Convention to allow compassion to be shown to all wounded animals upon a battlefield. The Rev. F. Laurence, of Weston Vicarage, Yorkshire, has had an interview with General Dubois, a deputy of the French President, on this matter, and I believe obtained from him a promise that the matter would be laid before the President, with an assurance that it would obtain his cordial approval; but one wants to rouse public opinion on this matter throughout the land.

H. D. Rawnsley.

DECEMBER 31ST IN NORTH LINCOLNSHIRE.

WHO but a lunatic would have spent the last day of 1898 trudging amidst bitter driving sleet along the alluvial flats of the Humber, some half score miles from Grimsby? The answer is, "Anyone who is a lover of old buildings, such as the Saxon church at Barton-on-Humber or the still remaining portion of Thornton Abbey; anyone who, in addition, is an enthusiastic student of nature, for in North Lincolnshire something will be experienced far different from what most counties afford." Thus it was that the writer, ignoring the weather forecast, started for the Abbey ruins on the day mentioned. Quite close to Grimsby one sees moist pasture fields containing huge flocks of lapwings—those useful birds of lustrous green and purple and snowy white, too frequently sold in the London shops as "fat plovers." On the Humber bank yonder are two or three companies of knots stalking up and down along the mud. Tiny little bodies have they, no larger than a sparrow's, but the legs are comparatively long and the toes unwebbed, as befit a wader, who is a plebeian brother of the dainty snipe. The flocks are very compact, and if disturbed by the fowler speedily alight at a bowshot's distance. Yesterday a knot was picked up and examined, it was the victim of those cruel loafers who prowl about in winter simply to "kill something." Out of range of the gunner are the gulls, graceful and leisurely, the common, the lesser blackback, the pearly blue

herring gull, and one greater blackback, who warily remains in the offing. Turning one's eyes inland, motley groups of birds are seen following the plough—rooks, seagulls, starlings, but dominating all, the hooded or Royston crow, the "Dane crow" of Lincolnshire. The Dane crow is a resident in Ireland, but in England he is seen only in winter, and even then is chiefly confined to Norfolk, Yorkshire, and Lincoln, particularly the last named. Look at this crow a moment. His hood is deep black, so are the wings; the undersides are distinctly grey. At a distance he has an uncanny appearance, and by one of those strange unaccountable freaks of fancy, he ludicrously calls to mind a starveling goose. He is terribly suspicious, and will raise a hue-and-cry almost before you can get your field-glass in focus. Having alarmed his associates, he flops languidly on the newly-turned furrow a few yards further away. Shoot him not; he is the very prince of scavengers, and such are sorely wanted in these primitive places. Dead sheep, fish offal, garbage from dust bins—all are his. The starlings which just rose from that farmyard garth, shall we number them by hundreds or by thousands? The cottager loves a starling pie, and pies are easily obtained since a dozen or two of these birds can be brought low at one shot. But not even the hardiest agricultural labourers will try a meal of "Dane crow," hence, with his bodyguard of gulls, rooks, and starlings, hoodie need not fear to take advantage of the slight thaw which has set in.

Passing by a typical marshland church of dark brown limestone, it is noticeable that the crannies of the wall shelter a delicate fern, the rue-leaved spleenwort. In place of the customary yew, the churchyard contains four fine walnut trees. Just visible on the murky sky line is a kind of twin church, whose register contains this curious entry: "1546. A witch was devoured in the bounds of ye fields (of the village) and buried there ye second Julye." The tombstones of the burial ground are all laid flat on account of a singular wish of a late benefactor.

But we must hasten forward or the old Abbey will never be reached. Life is not wanting around us. Yellow-hammers flit about amongst the immemorial grey thorn clusters. These birds sang all through the hot summer and did not cease till September. There is a jenny-wren, and if you care to walk along the hedge side she will follow you a quarter of a mile, giving a queer little chirp at intervals. The movements of the little creature along the mound are quite mouselike. Three birds there are which accompany the rambler in his walks in friendly comradeship—the wren, the hedge-sparrow, and the yellow-hammer. The wren remains among the thorns, or runs along the bank; the hedge-sparrow or shuffle-wing gives his wings a shake before he removes to another bush, but he keeps well in view; the yellow bunting flies straight and seeks the topmost twig.

Whilst observations have been made, ground has been quickly

traversed. Soon a ditch is crossed, and the visitor stands between two high rampart walls. In front is the entrance gateway, pictured in Knight's "Old England" and in many a forgotten volume on architecture. There is the groove where the portcullis used to move, and flanking the gateway are two round towers. Overhead is some rude sculpture. Stepping into one of the loophole arches for shelter one is fain to attempt a reading of the symbolism and to scribble a note or two. It is over 600 years since those foundations were dug, and 500 since those emblems and sombre figures were carved, and the likeness of William le Gros is greatly battered. The walls have here and there a coating of pretty *Barbula* moss, and at the foot are still some green shoots of pellitory, a plant which loves such situations. December 31, yet here are dandelion and groundsel in bloom. The stream below is sullen and icy, nevertheless the water-parsnip and brooklime are vividly green. On the margins of the brook are the dead stems of willow-herb with its shattered forlorn capsule valves flapping in the breeze: the stalks are brittle, the willow-herb cannot defy the storm like the pellitory. But the biting wind nips the ears and benumbs the fingers so that the pencil cannot do its duty. At the back of the ruin is a haven of comparative calm. Standing there amid clumps of elder and patches of trailing brambles, there is time to inspect the varied materials of the building—oolite, chalk, rubble and brick. Attention is however drawn to the curious malformation of an elder branch. The branch is about three feet long, and where it leaves the trunk it is of normal shape and about a quarter of an inch in diameter. After growing properly for two or three inches, with very little transition it flattens out to a width of one inch, which it maintains nearly to the end, where it is twisted and twined in a most grotesque way, coming to an abrupt finish. The fasciation does not appear to be the work of a gall-fly, the new buds are rightly formed and promise well for the coming year. On this side of the Abbey are several ash trees. In some parts of the country the ash is rather scarce; in this region, out of five trees, three will be of that species. Most of the larger farmhouses have a weeping ash in the centre of the greensward of the front garden, just as many of them have a large block of stone by the gatepost as a stoop from which a rider may mount his steed. Now these pillars are of porphyritic granite, which is not found in Lincolnshire but is common in the Lake District; of millstone grit, for which we shall have to search the Midlands; or of basalt, well known in Scandinavia. Whence then came these blocks? Out of the Boulder Clay; they are travellers from afar, ice-carried from their native beds. The farmer has considered utility: the thoughtful rambler must also think of geology.

Crossing the field to the farm, one is struck by the fact that the walls and farm-buildings are composed of the ruins of the abbey, whose ground plan covered several acres. The collie at

the front door barks vigorously, and a strong force of chaffinches leave the crumbs which they have been eating on the brick causeway. The penetrating notes of titmouse major are heard from an old apple tree, but the full song will not develop yet awhile. With a *ghic*, *ghic*, and ludicrous clatter and cackle, a blackbird clears the wall like a cat. Again jenny wren shows herself—why, let us see, five days ago was the feast of St. Stephen, on which festival until quite recently Irish boys were accustomed to hunt the wren for her alleged "bewrayal" of the Irish by tapping on a drum.

> "The wran, the wran, the king [*sic*] of all birds,
> St. Stephen's Day *she* was caught in the furze."

Following the hedgerow to look for old nests, one notices a number of little silky oval pouches; close examination discovers a hole at one end. These cobweb purses are the late homes of the pupæ of vapourer moths. The female of these plainly coloured insects uses her last abode as the spot to deposit her eggs. The hawthorn twigs have not yet assumed the pinkish tinge of returning spring. Near the hedge is some gorse, its yellow flowers on a dark ground looking like cloth of velvet and gold. Gorse would appear to be the southern name, in Yorkshire and Cumberland it is whin, here it is furze.

The field road ends, and here is the railway station. Give the waiting room fire a vigorous poke. Let the wind sough and groan, let the seaward plain look never so gloomy, and the storm-wracked sky never so fierce and forbidding: it is well, for we will not stir hence for the present.

Battersea. WALTER JOHNSON.

CHAUCER'S STUDY OF NATURE.

IN an ancient MS. of the fourteenth century there is a portrait of Geoffrey Chaucer. In the upper right-hand corner, where it was the custom to insert the coat-of-arms, there is a delicately worked representation of a daisy plant in full bloom. The artist was happy in his design, for Chaucer has come down to us as the poet who not only chose a flower for the theme of much of his work, but who placed the charms of the humble daisy above all other flowers. It is the "Eye of Day, the Empress and the flower of flowers all," he tells us, and he has neither English rhyme nor prose sufficient to sing its many charms.

The list of plants named by Chaucer in his poems would be outnumbered any day by the plants gathered on one of our Saturday afternoon Field Club rambles. But probably they were pretty nearly all that were known by town dwellers and

laymen in his day.* Alexander Neckam, who was the author of a Latin poem, "De Naturis rerum," gives a long list of herbs, trees and flowers for the garden, but the greater part of his life was devoted to study, more especially of nature. Chaucer was a civilian, so if his list seems limited, we must not blame him. He was a busy public man, to whom also the passing stream of his fellow creatures was always interesting.

The daisy is, of course, the chief flower. Chaucer loved it above all other flowers in the mead. How he could have passed over even without a mere mention flowers like the primrose, violet and daffodil, seems very curious to the modern mind. But his attention may have been drawn to the daisy by its frequency as a subject of the verse of the Trouvères and its employment in the service of chivalry. The praises of Marguerite de Valois furnished the theme for many poems. The daisy flower was held to be her prototype; it was the emblem of fidelity in love and the badge of the province of Languedoc. We know Chaucer's early efforts followed the French taste, and his translation of the "Romaunt de la Rose" may have opened up to him many French ideas. Dante used the daisy in a different way. With him it was a spiritualised flower, a type of the souls of the blessed, rather than our simple bairnwort,† the daisy of childhood and innocence. Chaucer may have originally drawn the object of his love from abroad, but his treatment of his theme is more English than foreign.

In the "Nonnes Preestes Tale" Chaucer gives us certain herbs used by the apothecary of his day. There was the "laureole" or "laurer," meaning the bay tree, that gives "so passing a delicious smell." A fragrant oil and a perfumed water were obtained by distillation from the berries of *Laurus nobilis*, and at a later date from the leaves of *Prunus laurocerasus*. But the apothecary combined the two characters of the tree—the laurels resist "witchcraft very potently, as also all the evils old Saturn can do the body of man. The berries are very effectual against all poisons of venomous creatures, as also against the pestilence and other infectious diseases."

The centaurie is probably our dainty little *Erythræa centaurium*, a plant fabled to have sprung from one of the Centaurs, who taught mankind the use of plants and medicinal herbs. Its leaves have a very bitter taste: "'Tis very wholesome, but not very toothsome."

"Fumitere" (*Fumaria officinalis*), though a tonic, does not hold so high a place in medicine as in witchcraft. It is a "rank" plant, and where it flourishes abundantly betokens idleness and neglect on the part of the husbandman. Its name is said to

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* 1157-1217, a professor at the University of Paris. Became an Augustinian monk at Cirencester.

†["Bairnwort" is probably a corruption of "banwort," *i.e.*, bonewort, because, as Turner says, "it helpeth bones to knyt agayne."—ED. *N.N.*]

indicate its power, for the smoke of the burning weed was said to exorcise evil spirits.*

"Ellebor."—The hellebore is one of our February flowers, keeping company with the daisy and chickweed. Its dried leaves were used in medicine. It has, too, a very sinister reputation.

"Catapuce" is said to be the broad-leaved or caper spurge (*Euphorbia Lathyris*), with a very bitter caustic principle. Like all the spurge family, it is full of a milky, acrid juice.

Gaten or gaitre berries are the berries of the dogwood (*Cornus sanguinea*). They abound in a very wholesome oil, and the bark of the tree is very astringent.

Among other herbs Chaucer also mentions the "herb ive," the "plaintain," the "wall pellitory," "egremain," or agrimony, the valerian under its old name of setewall or setwall, generally united with the licoris. Thus the Clerk of Oxenforde:

> "He himself was swete as is the root
> Of licoris or any setewale."

And again:

> "There springen herbes, grete and smale,
> The licoris and the setewale."†

Culpepper tells us that "the root of valerian boiled with licoris, raisins and annis seed is singular good for those that are short-winded and for those that are troubled with the cough." I should think these ingredients would equally well recommend themselves to our modern mind. "Licoris" is the old English form of the French *liquiritia* corrupted from the Latin *glycyrrhiza*, the liquorice plant, which is not indigenous. "The root is long and slender, of a fine yellow colour inside, and full of juice sweeter than sugar. It grows wild in France, Italy, Spain and Germany."

"Lunarie" is the moonwort, *Botrychiam lunaria*. Then the plant was used in incantations, and it was also considered efficacious as a cure for madness.

In the "Knighte's Tale" Palamon escaped from his prison by drugging his gaoler with narcotics and "opye." The use of opium must have been known to the apothecaries for Chaucer to mention it, but he does not say anything about the poppy,

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*[Coles, in his "Adam in Eden" (1657), says that fumitory was so named "because being of a whitish blew colour, as smoak is, it appeareth to those that behold it at a distance as if the ground were all of a smoak." Dr. Prior, however, says that the old authors generally derive the name "from the belief that it was produced without seed from vapours rising from the earth." It has also been pointed out (Britten and Holland, *Dictionary of English Plant Names*) that its root, when freshly pulled up, gives off a strong smell remarkably like the fumes of nitric acid.—Ed. *N.N.*]

† [No doubt, in the 16th century setwall was the name applied to *Valeriana pyrenaica;* but perhaps earlier it was applied to the rhizome of the turmeric, *Curcuma longa*, known to the apothecaries as zedoaria. Parkinson gives a figure of this "outlandish root" in his "Theatrum," p. 1612, and it is suggested by Messrs. Britten and Holland that "setwall" is a corruption of "zedoaria."—Ed. *N.N.*]

from which the juice was obtained. Even in those early days opium would seem to have been imported from the East.

In connection with the plants used for their magical properties, Chaucer uses an old proverb in "Troilus and Cressida." "Nettle in, dock out," is a common saying of a common practice. The dock leaf is the best cure for the nettle sting, especially when the doggrel, "Nettle in, dock out, dock rub nettle out," is chanted at the same time.

Turning from the "floweres smale," Chaucer's epithets for trees are admirable, and I think doubtless supplied Spenser with his descriptive stanzas in the first canto of the Faërie Queen. About 1390 Chaucer was appointed one of the Foresters of North Petherton Park in Somersetshire. The village is but a few miles from Bridgewater and on the edge of the Quantocks. Whether Chaucer made use of his appointment or ever went to Somersetshire I do not know, but his "Assembly of Foules" was written about 1358, before even his travels in Italy. Here was the "builder oke," the "hardy asshe," the "pillar elm," with its melancholy suggestion of our last resting-place, the "sailing firre," the "cypress death to plaine," the "holm" or holly, used for whip handles, the "olive of peace" and "eke the dronken vine," the "victor palme, the laurer too divine."* The "box-pipe tree" seems to me as if it ought to be the elder. Its old name was the "bore tree," and in early times the branches with their pith removed were utilised as flutes and pipes. Its very Latin name *Sambucus* signifies an ancient musical instrument. But I have not been able to find any confirmation of my theory.

Bird life was not neglected by Chaucer. He seems to have had a particular affection for the "smale foules." They awoke him in the early spring mornings by the noise and sweetness of their song as they sat on his "chamber roof without upon the tyles." In another place he speaks of the birds singing "with voice of angell in his armonie." Then he gives a list of birds in much the same style as the trees. There is the "gentle falcon," the favourite of royalty, that perched upon the king's wrist, the dove "with her eyen meke," the "jealous swan against his death that singeth" and the owl that "of death the bode bringeth," the "tame ruddocke," our dear little robin redbreast that comes so confidently to our gardens, the sparrow even, noisy and chattering but "Venus' son," and the "nightingale that calleth from the fresh leaves newe," the crow with "voice of care," the throstle old, and frosty field fare. As to the barnyard inhabitants in the "Nonnes Preestes Tale," "cok chaunteclere" and "his faire partelote," we could scarcely desire a better description of our domestic fowls—chanticleer, his comb "redder than the fine corall, enbattled as it were a castle wall," with his "seven wives walking him beside," is quite a familiar scene.

* To prophesy.

Of gardens, Chaucer has not much to say. Probably, from his house in Aldgate to John of Gaunt's palace at the Savoy, he saw little else but trees and gardens. From the Savoy to Westminster was probably another stretch of green, only diversified by the beautiful cross in the little villiage of Charing, that marked King Edward's grief for Queen Eleanor. Gardens and green all around—with blossoming bowers upon the river banks. There, too, were ponds that "swommen full of small fishes light, with finnes rede and scales silver bright." The animals that played about were those that we expect to see in a nobleman's park. The "dredeful* roe," the "buck, the hart and hind, squirrels and beastes small of gentle kind." His descriptions of landscapes are generalisations. While he scarcely misses the minutest points in the appearance of his fellow creatures, their background is faint and indistinct. In the foreground you see the atmosphere of Spring, the daisies, the small birds and animals. Beyond is but an "emeraude" blue, happy to the eye and suggestive of all the joys and pleasures that nature and the open air can give a man. But Chaucer spent the greater part of his life in the atmosphere of the Court, and his real sympathy was centred on the many types of people that he met.

But in the eve of his life he sought the quiet of Nature. Under the shadow of the walls of Westminster Abbey, in the garden of the Lady Chapel, Chaucer found a home. The site of his humble house is now covered by Henry VII.'s beautiful Chapel. Five hundred years have passed since Chaucer died, but his work will never grow old. If, indeed, the human interest is the strongest, still we can surely admit that Chaucer did not neglect the humble flowers and those "small beastes" which help so much to brighten our lives even in these latter years of the nineteenth century.

EDITH J. DURRANT.

REVIEWS AND EXCHANGES.

Murderous Millinery. By Mrs. Edward Phillips. Humanitarian League's Publications, N.S., No. iv. 1901. Price 1d.

This is a cogent statement, from the latest authorities, of those facts, too familiar, alas, to Selbornians, which require persistent iteration to force them on the unwilling ears of the guilty.

The Animal Story-book Reader, from the Animal Story-book and the Red Book of Animal Stories. Edited by Andrew Lang. With 77 Illustrations by Henry J. Ford and Lancelot Speed. Longmans. Price 1s. 4d.

This well-printed, strongly bound and excellently illustrated reader contains fifteen stories from Mr. Lang's deservedly popular collections, including bears, monkeys, dogs, frogs, elephants and kangaroos, several of them taken from Dumas. There are notes on the longer words, so that the whole forms a most attractive school-book, inculcating, moreover, wholesome lessons of humanity. It is sure to become a favourite in any school that adopts it.

* *i.e.*, timid.

Knowledge Diary and Scientific Handbook, 1901. Large 8vo. Knowledge Office. Price 3s. net.

Almost every trade and profession has its special diaries and year-books, so that it was a good notion on the part of the proprietors of our valued contemporary, *Knowledge*, to inaugurate the new century by supplying one for students of science. A whole large octavo page, ruled with 32 lines, for each day, gives ample diary space, besides pages for monthly notes and a page of cash account; but eight pages for letters received and despatched seems somewhat inadequate. The distinctive features of the book, however, are the full astronomical ephemeris with star maps for each month, an excellent sketch of scientific progress during the nineteenth century, a calendar of events in the history of science, and other essays. We should wish that in future issues astronomy should not occupy quite such an exclusive position, as there are many physical constants which the man of science would wish to have at his elbow; and we would beg also that advertisements should not find a place, at least, on the front page of the cover.

My Peafowl and my favourite Peahen. By Lady Alicia Blackwood. Operative Jewish Converts' Institution, Hackney. Price 4d.

This is a neatly got up little volume of stories, not only admirable in their motive, that of showing the cruelty of robbing birds of their eggs, but also conveying much practical advice on the rearing of peafowl, written specially for children.

The Birds of Lleyn, West Carnarvonshire. By O. V. Aplin, F.L.S. Reprinted from *The Zoologist* for November, 1900.

Mr. Aplin is so well known an ornithologist that this contribution towards a history of the birds of North Wales, the result of a fortnight's visit in 1899, cannot fail to command attention.

Penzance Natural History and Antiquarian Society. Reports for 1896-7, 1897-8, 1898-9.

These annual reports of a Society which dates from 1839 are good examples of what we consider such reports should be, plain, business-like statements of work done with no attempt to include abstracts or partial accounts of papers read.

The School Magazine: a Miscellany of extracts from the current literature of the day, books, magazines, newspapers, &c. Edited by David Campbell. Educational Press, Dublin Street, Edinburgh. No. 1, August, 1900; No. 4, November, 1900. Price 1d.

This little magazine of twenty-four small pages monthly is intended to serve as an extra reader in schools. The extracts include both prose and verse, are well chosen, decidedly interesting and carefully annotated. We are glad to see a section in each number devoted to Nature Study, and we wish the venture every success.

Received:—*The Victorian Naturalist* for October and November, *The Naturalist*, *The Irish Naturalist*, *Knowledge*, *Science Gossip*, *Humanity*, *The Animal's Friend*, *Our Animal Friends* and *The Agricultural Economist* for December.

NATURAL HISTORY NOTES AND QUERIES.

How Rats carry Eggs.—This subject seems still to create interest, and I continue to have letters regarding it. One from Crewton, near Derby, says:—"Seeing that you were the first to open up this question in NATURE NOTES, I tell you what a friend related to me that he witnessed on his father's place at Belper, a small town just the other side of Derby from here. Late one afternoon he saw three rats crossing the yard from the direction of the fowl house; one rat had a hen's egg between its fore legs and its mouth, and was being carried by the other two, one at each end, that is, they were carrying in their mouths the other rat with its back downwards; and a day or two afterwards he heard such a squealing noise in the fowl-house, more like that of a child than of a rat, so he went and opened the door, and there, behold you, was Mr. Rat on his back,

with the egg as before mentioned, and two others endeavouring to raise him up and away. . . . I have written this to you as I feel somewhat incompetent to persuade myself to write to the Editor. But I strictly avow that what I have told you is the sincere truth as I had it related to me by my then next-door neighbour, and I could not but believe him, as he told it in such a way as the most sceptic could not detect in him any motive whatever for telling it untruthfully or boastfully."

December, 1900. EDMUND THOS. DAUBENY.

A Friendly Mouse.—Seeing Mr. Matheson's notes this month (p. 230), I am reminded of a somewhat similar experience I had a few years ago. I had gone to old fishing quarters on Dartmoor, and the sitting room I usually occupied being taken by other lodgers I was shown into another apartment. After supper a mouse made his appearance on a large oak chest which served as a sideboard, and was busy picking up crumbs. He seemed to be very friendly, and took no notice of my movements beyond watching me with his bright eyes, so I thought I would see how tame he really was. Remembering how fond animals are of being scratched at the back of the head or behind the ear, I slipped my hand quietly along behind a book and tried this on with my little companion. He did not stir, but, to my surprise, turned round and nipped my finger. This caused me to withdraw my hand, and I was thinking what move I should next make, when the door opened and the landlady made her appearance, to have the usual evening "Tell," as it is called in Devonshire. I begged her to keep quiet on account of the mouse, who had retired at her approach, but she said she could not bear such creatures, for they frightened her, and she would go and get "Bundle," the cat. To my joy "Bundle" could not be found, but I fear he was put in pursuit after I had gone to bed, for I never saw the mouse again. My reflections then were that I possessed a sympathy or fellow feeling for wild creatures, and that my landlady did not, and I also thought, once more, what an odd thing it was that any human being should be frightened by a mouse!

Les Colondalles, Montreux, Switzerland, GILES A. DAUBENY.
December 10, 1900.

Cat and Mole.—While standing outside the front door of a house in Jersey, at which I was once staying, I observed the cat belonging to the house walk from under the bushes of a side bed with a mole in her mouth. On reaching the centre of the lawn she put down the mole and began to play with it, as cats usually do with a mouse. Something, however, attracted her attention in another direction, and she turned her head round. To attempt to crawl away would have been useless on the mole's part, but, with little motion of its body it began to bury itself through the grass and earth, and in a remarkably short space of time had disappeared altogether, so that when puss again looked round the only trace of her plaything was a slight motion of the earth just above the spot at which it had disappeared. This she quickly observed and at once made efforts to regain it, but was too late. It was a strange, as well as an amusing sight, and I should think a very rare one. It should be borne in mind that it was not the soft earth of a bed in which the mole so quickly buried itself, but the firm, trodden earth of a grassy lawn.

C. E. C.

Hedgehogs.—Is it true that hedgehogs suck eggs? A year or two ago a stray hen laid some eggs among the rhubarb leaves in our kitchen garden. One of my children discovered it by the hen scuttling out from among the leaves as she passed: she went to look and found four eggs which the hen had just left with a hedgehog lying on them.

I was absent from home at the time, but when I returned next day she said to me, "Do let us go and see if the hedgehog is still on the eggs," and the same thing took place: the hen rushed off the eggs, and there was one more laid, and the hedgehog lying on the top of them, and they were all warm and perfectly sound. The hen must have been sitting on the hedgehog, and that on the eggs, and another egg had been laid since the day before, which looked as if the hen and hedgehog were friendly. Did he go there for warmth, or had he an eye to a good meal when the "sitting" was complete? The hen was evidently not afraid of her spiny companion. I was sorry afterwards that I had not left him to see what

happened eventually, but I took him away thinking that he was hardly a comfortable bedfellow, and he returned, but not to the eggs, and was ejected from the shrubbery by our young Scotch terrier.

M. S. YOUNG.

Bat in December.—On December 8, 1900, while returning from a walk, about 4.15 p.m., I saw a bat flying about in the vicinity of Woodstone Church, near Peterborough. It was evidently hawking for insects, and judging of the sudden darts in various directions, it was fairly well rewarded for its break into its winter slumber. The weather was unusually mild. Although it may not be unusual to see bats flying in the mid-autumn evenings, I do not myself remember seeing one hawking so late as December 8 before.

Broadway, Peterborough. W. H. BERNARD SAUNDERS.

Nightjar.—As a supplementary note to Mr. Denne's on the nightjar, the following incident may be of interest. Two or three summers ago I was walking over the cliffs on the Gower coast, when all at once I came plump on a nightjar sitting fast asleep on a rock at the bottom of one of the many basin-like hollows that are such a feature of the cliff lawns of our coast. I was almost near enough to touch the bird with my stick, but he or she awoke up just in time and fluttered off in deadly silence in a manner indicating intoxication; probably the glaring sun was too much for his eyes! The curious point of my story is this: twelve months after my first visit I was over the ground again, passing the same spot, and there, fast asleep, was a nightjar sitting on the very same stone—in all probability my friend of last year.

Mowbrick, Chepstow. F. H. WORSLEY-BENISON.

The Starling as a Mimic.—It is now some years since I became aware of the fact that the starling as a mimic of bird notes and cries stands second to none, not even to the parrot himself. I have heard starlings on my chimney and on trees imitate to perfection yellow hammer, missel thrush, *some* notes of the blackbird, a *few* notes of the song thrush, swift, tomtit, sparrow, lapwing, moorhen, jackdaw, owl's screech, jay, common fowl, sea-gull, woodpecker, and others which I cannot call to mind at the moment; also the postman's whistle, the creaking of a gate, the bark of a dog, the cry of a cat, the croak of a frog, &c. I have also noticed that the starling appears to imitate sometimes in its flight the flight of the swallow, and at a distance this is often very deceptive. The fact that the starling is able to imitate the "te-wit" of the owl would seem to suggest that he (the starling) "sleeps with one eye open," or at any rate with one ear open, unless it is that he is more wakeful at night than we imagine him to be.

C. E. C.

Robins.—There is a curious belief in this neighbourhood that in the autumn the young robins fight with and kill the old birds. Can any one tell me whether this is a common idea or only a local one? We certainly do see them fighting, but we seldom find a dead robin.

North Moreton Vicarage, Wallingford. M. S. YOUNG.

Swallows.—I grieve to say that in this neighbourhood the swallows seem to be diminishing in numbers. This year we have had only one pair in a chimney; last year only one pair in the village, and in the next village, a mile off, it has been the same. Before that we had as many as five pairs in our large old barn, and others in the village besides.

Last year there were more martins than ever before, a great many; this year not so many, but in both years we have had a great many more swifts building under the low thatched eaves of the cottages. When the broods were preparing to leave the village I could not count more than twelve or thirteen birds.

North Moreton Vicarage, Wallingford. M. S. YOUNG.

House Martins.—Your correspondent, Miss Hargrave, will I fear, have great difficulty in preserving the young house martins mentioned on page 230 of your last issue, but perhaps the mixture advised by Mr. Butler, composed of ants' cocoons and preserved yolk of egg ground up in a mortar with maizena wafers, the whole being mixed together and slightly damped, and as many flies as possible, may have the desired effect. Of course it would be impossible to feed

them entirely on insects. If they do survive it would be extremely interesting to see whether they would attempt to migrate or hibernate—I should think most probably the latter. If they migrate it would be a great point for those who favour the "migratory instinct," as they could not have learnt it from experience or from their parents, who, I understand, have deserted them. And whilst on the subject of hibernation I think the following passage from Carew's "Survey of Cornwall" which is not generally known, may be of some interest to your readers. The survey is very old, being written, I believe, about 1610, and is rather difficult to obtain. "In the West parts of Cornwall during the winter season, swallows are found sitting in old deep tin works and holes of the seacliffs; but touching their lurking place, Olaus Magnus maketh a far stranger report; for he saith, that in the North parts of the world, as summer weareth out, they clap mouth to mouth, wing to wing, and leg to leg, and so after a sweet singing, fall down into certain great lakes or pools amongst the canes, from whence at the next spring they receive a new resurrection; and he addeth for proof hereof, that the fishermen, who make holes in the ice to dip up such fish with their nets as resort thither for breathing, do sometimes light on these swallows, congealed in clods of a slimy substance, and that carrying them home to their stoves the warmth restoreth them to life and flight. This I have seen confirmed also by the relation of a Venetian ambassador employed in Poland, and heard avowed by travellers in those parts; where through, I am induced to give it a place of probability in my mind and of report in this treatise." The "Survey" will well repay perusal by anyone interested in Nature, as it contains a mine of information which, though now perhaps principally obsolete, is still very interesting, and especially so is a note on migration by Thomas Tonkin, Esq., in the edition published in 1811.

Penzance, December 8, 1900. ARTHUR W. HEXT HARVEY.

Great Northern Diver.—Whilst out for a walk last Sunday morning I saw a very handsome specimen of this species (*Colymbus glacialis*) which was swimming in the sea about five yards from the shore. It was, I think, an immature bird and was very shy, though on several occasions I got fairly close to it and watched it with a powerful glass. This species is not uncommon here in the autumn and winter, and I have seen two examples within the last few weeks. Unfortunately, however, when they do come they are greeted with such a fusillade that they must go away (if they are lucky enough) with a very poor idea of Cornish hospitality.

Penzance, December 8, 1900. ARTHUR W. HEXT HARVEY.

Long-Tailed Tit.—One day last May whilst out with a friend looking for nests, I found a long-tailed tit's nest built in the fork of a small ash tree growing in a swamp. I carefully inserted my finger and informed my friend that the nest contained eggs. He then felt inside the nest and told me I was mistaken, and that there were young birds. On his withdrawing his finger, however, out flew one of the parent birds, who had actually allowed me to feel the eggs underneath her: this nest contained eleven eggs, which is, I believe, a rather unusual number, the average clutch containing from seven to nine or ten eggs at the most, but I made quite certain in this instance by taking out the eggs (with great difficulty) and counting them.

Penzance, December 8, 1900. ARTHUR W. HEXT HARVEY.

Tits and Parroquets.—"E. C. R." writes: "Can you tell me of some way of attracting tits to a garden? I have tried hanging a lump of suet to the end of a stick stuck into the ground, but without success. The blue tit and great tit are both occasionally seen in this garden, and I should like to get them in larger numbers. With regard to the parroquets mentioned by Mr. S. G. Edwards, we have had one flying about our own and the neighbouring gardens since last September, when it was first noticed eating crab apples. A policeman tells us that he has seen it about this neighbourhood for the last two years. It is of a bright green colour with a red crest, and attracts a good deal of attention owing to its constant shrill cries."

Tame Raven killing a Rat.—I do not know whether the following account is an unusual occurrence. One morning I was attracted by my raven making a curious noise either of fright or anger, I was not sure which. On

looking out of the window I saw the bird in the garden attacking a full grown rat, making furious pecks at it and then dropping it, the rat in its turn standing on its hind legs and facing the bird. The raven did not seem strong enough to hold on to the rat, so contented himself with darting at it and pecking it violently and then letting go: once the rat got quite away, but was quickly caught again and subjected to the same treatment till finally it succumbed with feeble squeaks. I ought to mention that the raven's wing was cut, so that it could not fly after the rat when it escaped. On looking at the rat afterwards I noticed that its tail was broken, so that the blows inflicted by the bird were not confined to any particular part of the body. The raven seemed delighted with his achievement, and commenced plucking out the hair, and by the end of the day there were no signs of the rat.

Dale House, Blandford. MABEL S. C. DANIELL.

Birds in St. James's Park.—It may interest your readers to know that during last summer two pairs of magpies have built in St. James's Park. One of the nests is very conspicuous in a thorn tree overhanging the water; a keeper told me the other was on the island. For four or five years there has been a solitary "Pie" frequenting the Park, which apparently he never left, but with these new arrivals the joy of his existence must be much increased, and it is to be hoped that the young ones will increase likewise. It would be very interesting to know whether the new birds were "turned down" by private hands, or whether they have come there naturally. The little grebes, too, returned this summer, after leaving for awhile, owing to the dearth of fish subsequent to the emptying and cleaning out of the lake.

32, *Shaftesbury Avenue, W., November* 27, 1900. P. E. CLARK.

Phosphorescent Centipede. — Will you or one of the readers of NATURE NOTES be kind enough to explain the following. When walking last night (November 25) in a lane abutting on the Brighton Road close to Coulsdon, Surrey, my attention was attracted by a phosphorescence in the grass by the road side. Upon inspection this proceeded from a small thread-like worm about an inch and a half long, of a dull red colour, which upon being disturbed wriggled into the roadway leaving a luminous trail in its path.

The phosphorescence was not a passing luminosity such as one obtains upon disturbing marine animalculæ, but a maintained light very similar in colour to the glow worm, which on leaving the spot could be seen for some distance. Two oak leaves which had been traversed were quite brilliant. STANLEY FLINT.

[The phosphorescent animal is not a worm but a centipede, *Linotænia crassipes.*—ED. *N.N.*]

Heath Snails in Winter.—At the village of Newark, near Peterborough, on December 9, 1900, the weather being wet and warm, I found large numbers of the heath snail (*Helix ericetorum*) on the bank of a hedgerow. The bank faced due south. Some were adhering to dead stalks and grass bents, but most of them were apparently feeding on the dead leaves. Surely December 9 was unusually late for these snails to be out in such large numbers?

Broadway, Peterborough. W. H. BERNARD SAUNDERS.

Cydonia japonica.—It may be of interest to your readers generally, and to your correspondent, W. Cocksedge, in particular, to know that this Japanese quince not only fruits regularly here (the crops varying considerably from year to year), but that for many years past we have made a jelly from the fruit far surpassing "red currant jelly." It is most distinct and very pleasant in flavour, and I would strongly recommend all those with whom the Cydonia, or Pyrus japonica (as it is more usually called), fruits to follow our example.

The Holt, Harrow Weald. A. KINGSMILL.

SELBORNE SOCIETY NOTICES.

Council Meetings.—The next meetings of Council will be held at 20, Hanover Square, W., on Tuesdays, January 8 and 22, and February 5 and 19, at 5.30 p.m.

The Council has heard with deep regret of the death of John Charles Float, Esq., Mayor of Maldon, Essex, an active member of the Field Club. Mr. Float died on November 9, aged 65 years.

The Council begs to acknowledge, with thanks, the receipt of the following donations :—S. E. Mead, Esq., 5s. ; George Avenell, Esq., 21s. ; T. Windsor, Esq., 20s. ; Rev. A. R. Miles, 2s. 6d. ; Miss L. Marshall, 10s., and 20s. subscription for two years ; and also subscriptions of 10s. from W. H. Maw, Esq., F.R.A.S. ; 25s. from C. S. Ricardo, Esq. ; 10s. from E. A. Bristow, Esq. ; and 21s. from W. Whitwell, Esq.

The following new members have joined this year :—

J. S. Phillips, Esq., Sydenham.
Miss E. A. Long, Stamford Hill.
Thos. Windsor, Esq., Great Budworth.
J. F. Paul, Esq., Bury St. Edmunds.
A. T. Mellor, Esq., London, W.
W. H. Maw, Esq., Kensington.
Mrs. Marion Smith, Birmingham.
J. Rawlins, Esq., Cirencester.

SELBORNE SATURDAY AFTERNOONS.

Saturday, December 8.—Thirty-six members met at the NATURAL HISTORY MUSEUM and Professor Boulger gave a demonstration on the cases in the Botanical Gallery, illustrating the disposal of seeds and of pollen by animals, the defences of plants against the attacks of animals, and the adaptations of plant structure for the capture of insects.

Saturday, January 12.—ST. PAUL'S CATHEDRAL. Meet Mrs. Percy Myles at the West door (inside) at 2.15 p.m. sharp. The Rev. Henry Scott-Holland, Canon of St. Paul's, has kindly consented to act as guide to the Selbornians.

Saturday, January 26.—NATURAL HISTORY MUSEUM, GEOLOGICAL DEPARTMENT. Meet Mrs. Percy Myles in the Entrance Hall of the British Museum (Natural History), Cromwell Road, at 2.15 p.m. Dr. A. Smith Woodward, Assistant Keeper of the Geological Department, will give a demonstration on fossil fishes.

NEWS FROM THE BRANCHES.

Clapton (Lower Lea Valley).—At the monthly meeting held at the North-East London Institute, on Saturday, December 15, Mr. S. Allnutt read a paper, entitled "Some Un-natural Natural History." He quoted some interesting and amusing examples of early theories of the Universe, and of cosmography, and described some of the monstrosities, human, animal, and vegetable, which were, in mediæval times, confidently asserted, and credulously believed, to exist in the less known regions of the earth.

The next meeting will be held on January 19, when Mr. F. Gilbard, F.I.C., will deliver a lecture (with lantern illustrations) on "Microbes: Good and Evil."

ANSWERS TO CORRESPONDENTS.

A. C.—Isolated phenological observations, even when the species is precisely ascertained, are of little general interest. A ten-year average, with maximum and minimum is much more useful.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., care of Messrs. John Bale, Sons and Danielsson, Great Titchfield Street, London, W. ; letters connected with the business of the Society, enquiries as to the supply of the Magazine, subscriptions, &c., to the Secretary, A. J. WESTERN, Esq., 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 134. FEBRUARY, 1901. Vol. XII.

SELBORNIANA.

Death of Her Majesty the Queen.—Whilst, in common with all loyal subjects, Selbornians mourn their long-revered Sovereign, they also especially lament the loss of one who to artistic love of beautiful scenery added a great fondness for flowers and a humane consideration for animal life. As the owner of an interesting and well cared for little menagerie of pets at Windsor, and as patron of the R.S.P.C.A., Her Majesty showed herself imbued with true Selbornian principles.

Editor's Change of Address.—Correspondents are requested to note that the Editor's present address is 56, Mount Ararat Road, Richmond, Surrey.

A New Use of the Name "Selbornian."—Mr. E. A. Martin calls attention, in the January number of *Science Gossip*, to the fact that, in a recent Geological Survey Memoir, Mr. Jukes-Browne proposes to apply the name "Selbornian" to the Gault and Upper Greensand—two formations which merge into one another and are very typically developed in Gilbert White's old parish. Naturalists will recall the careful notes on these rocks that occur in the early letters of the "Natural History."

Croham Hurst Safe.—We have much pleasure in learning that the Croydon County Council has decided, by an unanimous vote, to purchase the whole of the beautiful wooded hill to the south of Croydon, known as Croham Hurst. Two years ago

successful negotiations resulted in the acquisition of thirty-five acres, and public attention was aroused to the fact that the most lovely portion of all, the remaining forty-five acres, was threatened with spoliation by the builders. As a result of an open-air meeting on the top of the Hurst on January 22, 1899, an influential Committee of seventy members was formed, to request that the whole eighty acres might be devoted to the use of the public for ever. This object has now been achieved, inasmuch as the Council has decided to offer the sum of £15,000 for the remaining forty-five acres. In the course of the two years' agitation many public meetings have been held, and the largest petition ever signed in Croydon was presented in favour of the purchase.

The Whitgift Hospital, Croydon.—The Croydon Antiquities Protection Committee have issued an appeal against the threatened destruction of this fine Elizabethan building, illustrated by some excellent views of its various aspects. We hope that the Committee, of which Mr. Whitaker, F.R.S., is chairman, and Dr. Hobson secretary and treasurer, may be as successful in their efforts as have those who have been urging the acquisition of Croham Hurst. Dr. Hobson is lecturing on the subject at the Thornton Heath Polytechnic on February 9.

Wild Bird Protection in Norfolk.—We are glad to learn that the Norfolk County Council have extended the order prohibiting the taking or killing of wild birds on Sundays, and the taking or destroying of wild birds' eggs, to those parts of the rivers Yare and Wensum that are within their jurisdiction.

Protection of Alpine Plants in France.—The following excellent article appeared in *The Standard* of January 18:—

"The French authorities have followed the example of the Swiss Government in seeking to protect the Alpine plants from the destructiveness of the tourist. The Prefect of the Isère has published a decree for bidding the uprooting or sale of a number of the more beautiful or interesting kinds. Great as is the Alpine chain, with upland valleys and peaks almost countless, yet no attractive plant, however abundant, can long survive the ravages of the tripper, and, what is worse, of the vendors of flowers. Those of the lower slopes escape by being also common outside the chain, though even here the cyclamen is to be protected; but at from three to four thousand feet a marked change sets in. The lowlanders gradually disappear, and the highlanders of the botanical kingdom take their place. From about five to seven thousand feet we are in the richest zone of the Alpine flora. The stony slopes are thickly covered with the dwarf rhododendrons, one of the plants mentioned in the Prefect's decree. Of these there are two species, one much commoner than the other, but at a little distance barely to be distinguished. A rhododendron slope in full flower exceeds in beauty even one covered with British heath or ling. But, as most of our countrymen are compelled to take holiday in August, they know little of the rhododendrons or the other flowers of this zone. To see them we must visit it early in July, for they begin to wane before that month is ended. Flowers, indeed, there are at eight thousand feet, and still higher, which, of course, come into blossom at a later date, yet on these stony places they are never in such profusion. But an Alp in July is a sight worth a long journey. The short turf is, in places, as full of flowers as a garden bed. Alpine plants, as a rule, do not grow high, and their

flowers are therefore massed together, enhancing the colour effect. The blue star gentians, the moss-campions, and the androsace are often blots of colour, but pansies and bell gentians, asters, geums, the vanille-orchis, the sweet-scented daphne, and a hundred others dapple the grass with blues and purples, pinks, yellows, and white. Such flowers may be found from one end of the Alps to the other, together, of course, with the edelweiss, which is another of those specially named for protection. There seems no particular reason why this little whitish, downy star-flower should be so greedily sought, but it is surrounded with legend, and the inexperienced think it is generally gathered at the risk of life. In reality, it is much more common on the rough grassy slopes than on precipices, and is still found in most parts of the Alps, but more profusely, we think, in the Eastern districts."

Proposed Devonshire Branch.—Mr. Ernest R. Collinson writes from Plymouth urging the formation of a Branch of the Society in Devonshire. It need hardly be said that if Mr. Collinson, or anyone else, will get together a sufficient number of persons in active sympathy with Selbornian principles, the Council will be only too happy to enrol such a branch.

Hampstead Astronomical and Scientific Society.—We are glad to learn that this young and active Society has changed its name to that of "The Hampstead Scientific Society," as it was a mistake to brand astronomy as either unscientific or extra-scientific.

King's Lynn Museum.—We have received a circular appealing to naturalists to assist in raising a sum of £2,000 required to furnish an adequate home for the various valuable collections already in the possession of the Committee of the King's Lynn Museum. Particulars may be obtained from, or subscriptions sent to, Mr. A. W. Williams, care of Messrs. Gurney's Bank, King's Lynn.

A RAMBLE THROUGH THE WOOD IN JANUARY.

THE unusual period of dry weather at this season of the year has made the roads beautifully clean, and in the heart of the country they are as sound and free from dirt and dust as in the early summer. Between the woods the white road stretches in front like a silver stream glistening in the sunlight, bordered by deep wooded slopes. The thorn fence dividing the wood from the road is old and broken at intervals by gaps which make entrance easy. Around a detached bush the honeysuckle is intertwined and freshens the dull colour with its green leaves already opened. Along the bank the tendrils of the ivy have crept and formed verdant patches which contrast pleasantly with the black and humid dead leaves scattered about. The bank itself is tunnelled with holes, and the output of fresh earth and the many imprints show that there is an active colony of white-tailed rodents there.

Here in the gloaming, if the intruder remain quite still and out of sight, he may watch with interest the pretty antics of the species at play. There, now, from a tuft of grass one runs, and catching a glimpse of me he sits up on his hind legs listening, then as I move he darts away in alarm and is soon out of sight.

There is a solitude in the wood which is always impressive. The bracken lies in tangled shapes, a mass of russet on the dead grass which is strewn with crisp brown leaves. In the damp places is a velvet carpet of moss, through which stray shoots of green grass are struggling. The dullish colour of the thick undergrowth, which presents an almost dark impenetrable barrier, is relieved by the healthy yellow flowers which stand out thickly from the stray bushes of gorse with their fresh green spikes, and the clusters of light green catkins hanging gracefully from clumps of nut-bushes near.

The large trees look blank and bare, but an oak sapling here and there is filled with brown shrivelled leaves which will not now be shed until pushed off by the new growth. Dotted about are birch trees whose white shining bark seems a fitting dress to the slender drooping boughs. A touch of life is given to the sombre dulness by the Scots firs and pines intermingled with the noble oak and the proud larch. Under the pine-trees the cones are thickly strewn and suggest the playthings of days long ago.

The bridle road which passes through a section of the wood is deep with coarse grass, and there are occasional boggy places, where the water lies, which bear the foot-prints of the hare and the rabbit. By the side of the road are numbers of dirty light-coloured stalks. These are the bare stems of the dead nettles which have so biting a sting in life, but now they are harmless to the touch and are merely like brittle sticks. From the roots the young plants are springing, and an old world recipe is that if of these porridge is made and taken during the first nine mornings in March it is often beneficial to the health. The road is indented with the hoofs of many horses, showing where the hunters have lately travelled, and across the path can be seen the regular tracks of the game and other occupants of the wood. Round a bend in the picturesque road I see a dark object moving in the long grass, and standing quietly a few moments, reynard emerges into full view, and after looking stealthily about him plunges into the wood. In the glade yonder is a flush of colour from a bed of the pale yellow primrose, and upon an adjoining knoll which is moist from the continually dense shade overcast, hosts of blue-bells are peeping through the earth. Farther on is a spreading beech tree which still carries some of its old brown leaves, presenting an agreeable brightness in contrast to the dull brown of the neighbouring oak. There is a noise amongst the dead leaves, and following the swaying boughs I see a squirrel run swiftly along and leap on to the adjoining tree, whence he hastens high up and then intelligently looks down

with his bright eyes, in which there seems to be the glimmer of wisdom. I imitate the chattering with which he greets me and to this he replies with vigour, hurrying off out of sight in the depth of the wood. Underneath the nut-bushes there is an abundance of broken shells which attest his activity. In the midst of the brake the gloom is freshened with the green leaves of the brambles, whose green stems also betoken a new lease of life.

Of all our forest trees the oaks stand out the noblest, like sentinels guarding the wood. Some of the trunks the bright green ivy clasps, as if keeping them warm during their repose, and the bark of others is coated with green dust, which always presents a welcome shade of colour before the new leaves come. Upon the ash the long brown pods containing the seeds still hang in bunches, to be forced off at the swelling of the black buds. In an open space where all the trees around are bare, a bush of holly fresh and green meets the eye and provokes the thought of what the dead time would be without the sense of welcome relief which it and its kindred afford. On the edge of the path lies a stately elm with a mass of earth disturbed by its brawny spreading roots, evidently cast down by the storm two years ago, for its bed is overgrown by the luxuriance of the undergrowth, and the wood and bark are discoloured by incipient decay. The crushed saplings near indicate that they have been maimed for life in the fall of the giant.

Here in the middle of the wood there is a gentle hush : no song of bird falls sweetly on the ear. Suddenly the calm is broken by the nagging scream of a jay from a thicket a little distant, and knowing that the busybody has some reason for his scolding, I wait quietly a few moments whilst the disturbance increases. Then a cock pheasant steps from the vicinity into the road, and with his beautiful plumage shining in the sunlight and streaming tail, he walks proudly across the open to the other side of the wood, closely followed by his more homely consort, apparently unconcerned by the impertinence of his assailant.

Proceeding along the path I now come to an open space where some acres are cleared of the undergrowth and the best trees have been felled, leaving the others to mature, with many saplings interspersed. There are numberless shoots of all descriptions springing up from the ground, but the view is quite clear, and the contrast is strange in comparison with the denseness of the general growth through which I have already passed. A stack of fir-trees lying near in the bracken and the white wood of some newly cut posts and rails, give signs of the recent handicraft of workmen, and the charm of the solitude is broken, and from fairyland I pass again into the everyday world. A board on a neighbouring tree gives a salutary warning, which, relying on the benevolent good-will of the noble proprietor, I interpret as being inapplicable to the man who carries no more

offensive weapons than his pencil and note-book, or takes away with him nothing except pleasant memories of an enjoyable hour spent in the forest glades.

On the border of the wood is a field of stubble, through which by the wood side is a rutty road to the red-brick homestead partly concealed by many ricks, with a row of aged elms standing in the background. There is something attractive in these roads, which are common in the country, to those who do not have the misfortune to traverse them in winter, because of their native primitiveness. Two dark lines indicate the tracks of the wheels of the vehicles which pass, and a centre one, less worn, shows the passage of the animals and foot-passengers. On every side the lines are bordered by the long grass in rank profusion, which, not being kept under control by the traffic and the road-man, furnishes an occasional grazing ground. These roads are relics of what our distant forefathers so valiantly struggled with when it was more pleasant to journey on horseback than by vehicle. Along the sandy road are several holes where partridges have been delighting themselves by plunging in and tossing up the gritty soil, and in the field two pairs of these birds are keeping company, evidently preparing for the brooding season. Over the hedge, in the field running up to the house, a welcome sight greets me in the shape of a lamb, whose thick black legs seem too sturdy for his frail body, and with ears stretched out he gazes at me with wonder in his dark face, then presses close to his mother as she moves on in unwearying search for the new birth of the grass. The time is early for lambs, but the weather is exceptionally good for them. It is the first I have seen this year, and as I stand watching it I hear the bleat of another sheep, and from the bend two other pretty creatures with white legs and faces race to their mother, and as they eagerly partake of their sustenance, one on each side, she turns and looks lovingly at them. Over the field the grass has been closely cropped of the old growth, and the new already gives a bright green surface. A few prim daisies have come up with the new covering, and it is fitting they should flourish with the newly-born lambs, whose necks they would adorn with appropriate garlands.

The cattle stand quietly chewing their cud outside the gate of the farmyard, waiting to be let in for the night. The cowman enters from an adjoining field with a load of roots for their fare, and they move lazily aside to let him pass, but are eager to follow him.

There is the scent of freshness wafted on the slight breeze which ripples the tops of the elms, a crispness in the clear air which brings the glow of health to the cheeks, a firmness in the earth and its corresponding increase of comfort in walking, and a quickening in the variety of vegetation all around, which are signs of early returning life that raise the spirits and fill the heart with hope of the beautiful time to come.

FRANCIS JOHN UNDERWOOD.

MY TREASURE TROVE.

I HAD been staying in a pretty country village in Shropshire during the perfect month of October which gladdened all our hearts about three years ago. The roads in the neighbourhood are very good for bicycling; so, one bright clear afternoon, I led out my iron india-rubber steed from the gun room, where it was stabled, and mounted for a ride along some pretty cross-country lanes. By-and-by I came to a fairly steep hill, which, being by no means a brilliant rider, and of a very cautious disposition, I descended carefully until nearly at the bottom, when I let the bicycle "go," and we ran gaily up part of the next steep ascent. Then I got off to walk. Indian summer reigned in this part of the lane, which is sheltered from wind or frost by high banks and hedges.

The southern-facing bank was sandy, the short grass warm with the sun; clumps of brilliantly azure hare-bells were still in bloom, a snowy campion lingered here and there, and even a belated honeysuckle threw a faint fragrance to the breeze, from a delicate cluster of blossoms which still waved aloft, despite the dragging clutches of the rude red trails of bramble.

I had just thought to myself, "That little paradise is past, here comes a long, dull, barren stretch of bank," when out of the brown slide of earth, from some old rabbit-burrow, gleamed a shining white star. At first I could not guess what it was.

It looked like a star-fish with an excrescence in the middle, the edges were very firm to the touch. I thought it must be some kind of a nut, until I found the centre felt soft, and then it struck me that it must be a fungus. As I have a regard for members of that family, I grubbed it out of the soft, sandy soil, and triumphantly carried it off in the leathern pocket of my bicycle.

When I came in, I was pleased to find that no one had seen my treasure trove before, so we looked it out in a fungus book, and found that its name is *Geaster fibrescens*.

MARIE BOILEAU.

NATURAL HISTORY OF QUEENSLAND.

II.

AS in other parts of Australia, the marsupials (animals which carry their young in a pouch) abound throughout Queensland; kangaroos and wallabies are the most common form of the larger marsupials. The platypus is one of the most interesting of all animals, owing to its possessing physical resemblance to many other creatures. It has fur like a seal and the bill of a duck; it lays eggs and yet it suckles its young. Another curious form of animal

life found in the colony is the dugong, or sea cow, which grows to ten feet in length, living under the water in the bays upon sea grasses. The flesh when cured is very palatable. There are no noxious animals in Queensland, and the snakes of the colony are of a retiring disposition. The salt-water and river fish are very numerous, and three hundred known species are suitable for food. The giant groper, weighing a quarter of a ton, the schnapper barramundi, garfish, are amongst the best known and liked. One Queensland fish, the ceratodus, is something of an amphibian, for it is enabled, by having a lung capable of breathing atmospheric air, to take its walks abroad when it wants a change. Queensland is rich in insect life; one soon gets accustomed to the mosquito, and the ants perform excellent service as scavengers.

In bird-life Queensland is well off. The cassowary and emu are still roaming through the ranges of the north; the parrot and cockatoo scream in the trees, and the laughing jackass, the friend of man, selects a convenient roof wherefrom to make his curious song. Queensland has birds which construct bowers to play in, and birds which build mounds in which to bury their eggs for the heat to hatch. The lagoons furnish good sport.

The trees and plants of Queensland are so numerous and so valuable for commercial and social purposes, that the services of a gentleman have to be retained as a "Colonial Botanist" to classify the different kinds. First and foremost come the rich natural pastures of the colony, which have great fattening properties and astonishing vitality in resisting dry weather; a few showers of rain will convert a burnt-up plain to a prairie smiling with verdure.

The gum-tree is found all over Queensland, and its wood is used for many purposes. Plenty of timber for building and fencing purposes is available throughout the colony, and some of the most valuable sorts are exported to other countries. The wild flowers of Queensland, very different to the prim blossom of an English hedgerow or meadow, are beautiful indeed. The lagoons are covered with immense lilies; the downs are in good seasons ablaze with many-hued flowers, and in the north flower-forms of curious shape and sparkling hue are met with. One of the commonest plants in the bush, the wattle (an acacia), has a delicate blossom, the perfume from which pervades whole districts. People who have lived in the bush and breathed the wattle-scented air can never forget the perfume. Grape vines grow well in the colony, and in many districts are cultivated systematically to produce wine.

REVIEWS AND EXCHANGES.

Nature's Garden: An Aid to Knowledge of our Wild Flowers and their Insect Visitors. With coloured plates and many other illustrations, photographed directly from Nature by Henry Trott and A. R. Dugmore, Text by Neltje Blanchan, Author of "Bird Neighbours" and "Birds that Hunt and are Hunted." New York, Doubleday, Page & Co., 1900. Roy. 8vo, pp. xvi., 415.

This is not a technical, but a popular work, which will interest English botanists, as an introduction to the many beautiful wild flowers of the United States and Canada. Instead of a technical botanical arrangement the flowers are grouped under transitions of colour, and there are also sections on fragrant flowers or leaves, unpleasantly-scented plants, and those conspicuous in fruit. The illustrations (coloured and plain) are very nice, but represent plants only. Of insects there are none, but a book cannot include everything.

The notice of each plant includes a short technical description of the flowers, stems, leaves, fruit, &c., the preferred habitat, flowering season, and distribution; and this is followed by a chatty dissertation on the history and peculiarities of the plant, its folklore, distribution, &c., and especially its mode of fertilisation, and attractiveness to insects. Sometimes this is followed by short notices of other allied plants. It is interesting to find how many English plants are found in North America, either by natural wide distribution or introduced; and in other cases native American plants seem, like some American birds, to have had the names of English species, more or less like them, applied to them.

There is much general information in this book which will be new to many readers, though there are several plants respecting which more information might well have been given. For instance, under Solomon's Seal nothing is said either of the origin of the name as applied to the plant, or the importance of the Seal of Solomon itself in folklore and magic; and the only medicinal use of Indian Hemp mentioned is that of its being used to poison mangy dogs, its importance as a narcotic and intoxicant throughout the East being entirely overlooked.

On p. 327 we meet with a very strange error: "Because of the alleged healing properties of the genus, Linnæus dedicated it to Æsculapius, of whose name Asclepias is a Latinised corruption." We need hardly say that Æsculapius is merely the Latin equivalent of the Greek name Asclepios (or Asclepias).

But it is a thankless task to pick holes in a book which will delight all lovers of Nature. W. F. K.

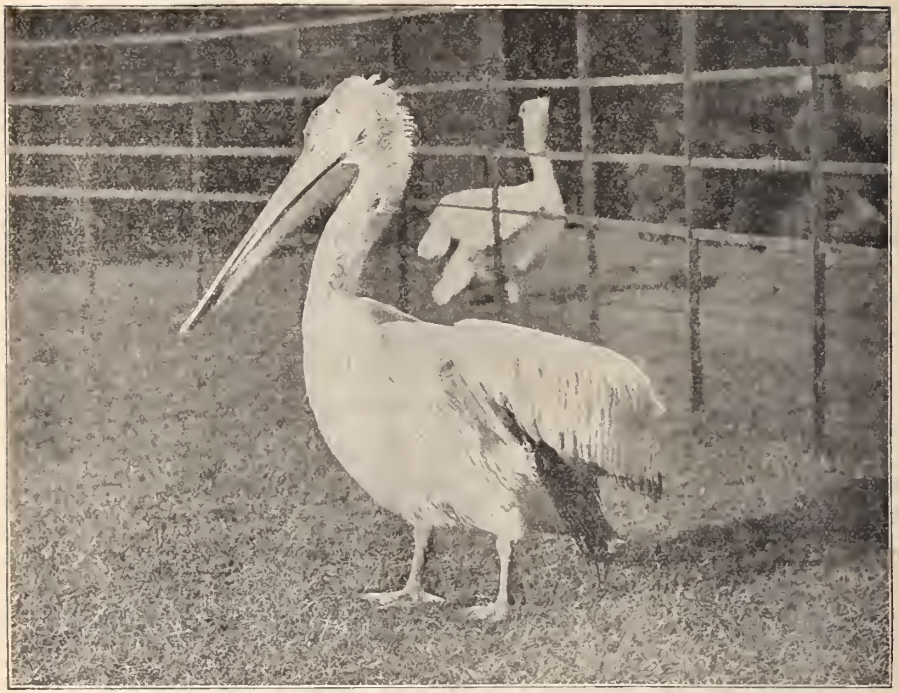
Botany: An Elementary Text for Schools. By L. H. Bailey. New York: The Macmillan Co. Price 6s.

Professor Bailey amazes us. Whether he writes on the most technical points of horticulture, or on the pure science of botany, whether for the teacher or, as in this beautiful text-book, for the taught, he invests his subject with a charm, a novelty and an inspiring force which are simply astounding to anyone who has had to read many of the scores of botanical text-books that issue from the English press. There is at the same time no room for complaint on the score of sketchiness, incompleteness or rash theorising, whilst no small part of the value of his works is the number, excellence and originality of the illustrations. There are more than 500 in the work under review. Unfortunately they make the book, which is sensibly bound in buckram with a neat leather back, very heavy. We are not sure that photography has not in some instances been unwisely substituted for diagrammatic treatment; but our main regret is that the author, by having drawn his examples from American plants and used none but vernacular names, has placed a great difficulty in the way of the ordinary English teacher who might like to study this most enlightening book himself, even if he cannot place it in the hands of his pupils. Could not an English edition be prepared?

Lord Lilford, Thomas Littleton, Fourth Baron. A Memoir by his Sister, with an introduction by the Bishop of London. Illustrations by Thorburn and others, and a portrait in photogravure. Smith Elder and Co. Price 10s. 6d.

A double pathos attaches to this interesting volume. It is the life of an ardent and actively-minded naturalist and sportsman who, crippled by gout, was

for many years only able to take exercise in a bath-chair; and the work is prefaced by an appreciative introduction which must have been almost the last literary work of Dr. Creighton, whose able pen is now for ever stilled. All



CRESTED PELICAN.

(From a photo by the Duchess of Bedford. By kind permission of Messrs. Smith Elder & Co., from "Lord Lilford.")

British students of ornithology know how Lord Lilford's zealous interest and unstinting purse were ever at the service of their science, and they will be glad to possess this record, largely told by his own letters, of his unselfish life. The work is copiously illustrated with beautiful portraits of the birds at Lilford Hall, one of which we are able, by the kindness of Messrs. Smith Elder and Co., to reproduce.

Our Bird Friends: a Book for all Boys and Girls. By Richard Kearton, F.Z.S. With 100 Illustrations from photographs by C. Kearton. Cassell and Co., 1900.

No work by the Messrs. Kearton requires commendation for patient skill in the collection of facts or for the charm of the most perfect of photographs direct from Nature. In saying, however, that the present work is in every way as good as its predecessors, we would like to protect the author and artist from the title they have chosen by explaining that it is by no means only "boys and girls," in the usual senses of those words, who can derive much pleasure and instruction from "Our Bird Friends." Though it makes no pretence to be a formal treatise on ornithology, and though it deals in part with those "remarkable nests" of

Robin Waiting for Breakfast.

Curlew's Feathers.
From "Our Bird Friends" (by kind permission of Messrs. Cassell & Co.).

which, perhaps, modern "bird books" have given us more than enough, it treats in a pleasantly discursive manner of many other most interesting topics, such as the protective shape and colours of eggs, the varying stages of development of young birds when hatched, the structure and uses of various feathers, and the calls and song-notes of many different British species. By the courtesy of the publishers we are able to give two specimens of the illustrations.

The Wild Animal Play for Children. By Ernest Seton-Thompson. David Nutt. Price 2s.

We are sorry this little book did not reach us before the Christmas holidays. It is a simple little play for seventeen boys and girls, and the rehearsals would give an admirable entertainment for winter children's parties, especially where *Wild Animals I have Known* and the author's other excellent works are already favourites. All the *dramatis personæ* are illustrated by the author.

The Journal of the Kew Guild. 1900. No. 8.

This is an exceptionally interesting and well illustrated annual part of what is, we believe, a privately-printed journal for past and present members of the Kew staff. It contains much interesting biographical matter, and from it we learn that the scheme of a physical laboratory in the Old Deer Park is finally abandoned.

The Derbyshire Naturalists' Quarterly, Vol. I., No. 4, December 15, 1900. London Agent; Elliot Stock.

We are pleased to see that Mr. Hinscliff, the editor, quoting a remark previously made in these columns, is able to say that in foretelling the success of his venture we have proved true prophets, and we hope the *Derbyshire Naturalists' Quarterly* may have a long career of usefulness before it.

Received:—*Knowledge*, *Science Gossip*, *The Naturalist*, *The Irish Naturalist*, *Humanity*, *Our Animal Friends*, *The Animal World* and *The Agricultural Economist* for January.

NATURAL HISTORY NOTES AND QUERIES.

The Mild Winter.—In the neighbourhood of Plymstock yesterday, I observed a blackbird suddenly rise from the hedge screaming in a manner which betokened fright, as is the wont of blackbirds when startled by a passer-by, especially during the nesting period. On examining the place whence it ascended I found a partially-built nest of recent construction. Evidently the mildness of the weather had induced this bird to build early in anticipation of the summer being at hand. Perhaps your readers might have met with similar cases. Among flowers still blooming in the hedges are the herb robert, the common campion (*Lychnis diurna*), and I also saw a strawberry flower. Of ferns there is an abundance, *Scolopendrium vulgare* predominating. Verily the seasons are changing. E. R. C.

Plymouth, January 1, 1901.

On December 21, 1900, a sparrow's nest with four eggs in, was found in a hay loft in this parish, and near the same place in a stack last January a robin was sitting on four eggs.

Franklin, Salop. O. A. Feilden.

Birds, Bats and Insects.—The open weather this month has had the following effects amongst others here. Thrushes are singing all day long, missel thrushes, hedge sparrows, and some other birds occasionally. Bats fly about, not only in the evening, but in the day time; while bees take dangerous journeys in vain quest of honey, dangerous, because if they settle on the cold ground they often become so chilled as to be unable to regain their home. To-day numbers of large flies were busy in a bottle containing the remnants of sugar used as a death trap for wasps in the autumn. It is generally supposed that a severe winter is destructive to insect life; but I fancy that a mild one is the more fatal of the two. Cold weather compels most insects to lie torpid in their winter quarters, where they are in comparative safety from their foes, and most, if not all, that

hybernate are capable of resisting long spells of cold. The moment a thaw sets in, even after the severest frost, gnats are to be seen playing about in quiet spots, as if nothing unusual had happened. Mild weather also entices many insects out in a semi-torpid state, when they become an easy prey while birds are not cut off from their supply of insect food by the hardness of the ground. Very few insects breed during the winter, and every one killed during that time is a family stopped next spring. I am inclined, therefore, to think that a mild winter takes greater toll of insect pests than a severe one, but seek enlightenment in the matter.

Market Weston, Thetford, EDMUND THOS. DAUBENY.
December 18, 1900.

Bat (p. 17).—In seasons of exceptional mildness it is not a very unusual thing to see bats hawking for food in December. In the year 1875, according to my diary, I noticed a bat flying about, apparently in search of food, on Christmas Day. Five years later I find a note to the effect that a large bat (probably the *noctule*, or great bat of White's inimitable classic), had been observed by me flying at large on December 3. Mr. White says of this species that it "retires or migrates very early in the summer," but such is not the case here. September appears to be one of its favourite months in this neighbourhood.

Fyfield, near Abingdon. W. H. WARNER.

On January 2, 1900, at Henley-on-Thames, I saw two common bats flying to and fro along a distance of about one hundred yards, and now and then making darts at some prey. It was at about 3.30 p.m., the weather was very mild and damp, and the ground was soaking from recent rain. Considerable numbers of small dipterous insects were about.

19, *Sussex Place, Regent's Park.* H. SCOTT.
January 2, 1901.

Moles.—What I have to say about moles disappearing rapidly underground will not be so interesting as what "C. E. C." has told us at page 16 this month, but it is as follows:—I have rarely seen them above ground and one generally observes them at work by the heaving of the fresh earth as they throw it up in mole hills. The first time that I remember seeing a mole in the open was about twenty years ago. I was walking in the afternoon in a garden in Devonshire and one of these remarkable animals came through the railing from the field and went slowly across the gravel path. I do not know if he saw or heard me and my friend who was walking with me, but he may have been aware of our presence from the vibration of the ground. Anyhow on arriving at the other side of the path he thrust in his snout at the edge of the turf, and, to my astonishment, was out of sight almost in a moment. He certainly did not take five seconds to make his dive underground, and what was also surprising, he left almost no mark to show where he had gone. I could hardly believe my own senses; but as I stood still at a distance of only five yards to see what the mole would do there could be no mistake. My friend had turned back to call up his terrier, who was fortunately engaged with other sport. The lawn was not often rolled and the earth under it was deep and soft after rain. The mole doubtless made use of a worm burrow when making his exit from the daylight, and it is quite likely that he took no notice of me whatever, but simply continued the pursuit of his prey in regular fashion. I hope we may hear more about moles, for their habits have been insufficiently studied.

Montreux. GILES A. DAUBENY.
January 6, 1901.

Cat and Mole (p. 16).—The incident described by your correspondent, C. E. C., is by no means rare. I have seen several instances myself. The celerity with which the mole burrows out of sight is little short of marvellous. But then as a sapper and miner he has no equal. A young man of my acquaintance last spring found a mole in one of his traps caught by the hind-quarters. He pulled up the trap, and went for a stick to kill his prisoner: when he returned the mole had almost sunk out of sight, though burdened with the trap,—a case of mining under difficulties.

Fyfield, near Abingdon. W. H. WARNER.

In a meadow near here there is a perfect circle of fungi (fairy-ring) about 20 paces in diameter. I do not know the names of fungi so cannot say what kind. Just within this circle moles have thrown up a perfect ring of hillocks, with a gap of only a few feet. There are no other mole-hills very near. Can there be any reason for the mole having followed the same line as the fungus?

Yoxford, January 9, 1901. E. H. B.

How Rats carry Eggs.—I am indebted to Mr. Read for his interesting notes hereon on page 216 in the November issue. I regret, in answer to his enquiry, that I cannot ascertain whether there were any indications on the eggs which would lead one to suppose that they were carried by the stoat in its mouth. The keeper told me that they were perfectly whole, not a single one cracked or disfigured, and that unfortunately is as far as I can report.

W. PERCIVAL WESTELL, M.B.O.U.

5, *Glenferrie Road, St. Albans, Herts, November* 29, 1900.

In reference to the letter in the December number of NATURE NOTES on the discussion as to how rats carry eggs, perhaps the writer may not have heard of the following method:—A rat lies down on its back and holds the egg in its feet, while a second rat is engaged to drag the prostrate one and its treasure by the tail to its hole. KATHLEEN ENID WILSON.

Lancing College, December 14, 1900.

How to Attract Tits.—In reply to "E. C. R.," Mr. F. Primrose Stevenson writes:—"In our garden at Norwich, within a few minutes' walk only of the city, it was our invariable practice, year after year, to suspend from the end of a string in front of our breakfast-room window, a lump of hard suet fat. My recollection of the number of titmice, of more than one species too, which constituted our daily patrons, is certainly not that of 'E. C. R.,' who complains of a want of success, for otherwise my father, the late Mr. Henry Stevenson, F.L.S., in his 'Christmas Carol for our Summer Songsters,' would never have written:—

'The Titmice, too, come with the rest,
But for these you suspend, by a string,
The hard suet and fat they love best,
And will eat, as they airily swing.
Their performance, at first, will amaze,
As, head downwards, they hang by their feet
To that firm dietetic trapeze,
Feathered acrobats, earning a treat.'"

If "E. C. R." will get a cocoanut and cut it in half and hang it up in his garden I think he will get plenty of tits to visit him, at least that is my own experience through many winters. The cocoanut is hanging outside this window from the verandah, and I get "great tits," "blue tits," and "black caps," and occasionally long-tailed tits, and they also much enjoy the basin of water that stands under the nut.

Lamorna, Torquay, January 3, 1900. LYDIA PENGELLY.

Owls.—White owls in this highly preserved district are steadily increasing in numbers. Brown owls however are rare. I heard one hoot here the first time for years a month ago. A neighbouring landlord tells me he has induced his keepers to spare owls, and has prohibited the barbarous pole trap on his domain. In the next village a keeper has a pair of white owls in a tree close to his house, and is one of the enlightened of his race who permits them to live. Would that more were like him.

Market Weston, Thetford, December, 1900. EDMUND THOS. DAUBENY.

Large Hawks.—A honey buzzard has lately been shot near here. Owners of estates often find it useless to try and save the lives of large and rare hawks, for if they do so the keepers kill them on the quiet. If I were the owner of a sporting estate I would make it worth my keeper's while to spare these noble birds, and would give an extra premium in all cases of their nesting and rearing their young successfully.

December, 1900. EDMUND THOS. DAUBENY.

Robins (p. 17). — Your correspondent, M. S. Young, in last month's NATURE NOTES asked whether it was a common or local idea that in the autumn the young robins fight the old birds with intent to kill them. I have also heard the same thing while living at Hendon: as to it being true I cannot say. Although having witnessed the birds fighting on several occasions, never have I seen the death of either combatant. It seems to be a common fable.

14, *Crane Grove, Highbury, N.* CHARLES E. J. HANNETT.
January 11, 1901.

In this part of Berkshire I have also heard the country-people speak of the young robins killing off their parents in the autumn-time, but we seldom or never, as your correspondent remarks, find the slain.

Fyfield, near Abingdon. W. H. WARNER.

Your correspondent, Mr. Young, will be perfectly safe in saying that robins are very quarrelsome, and dispute even with their own offspring for the possession of a favourite "beat." Some short time ago I sent a short note to this magazine of a fight, of which I witnessed the finale, between two robins, one of the combatants being left in a dying condition. In fact, I think robins run the tits rather close in the point of quarrelsome dispositions. A week or two ago I was watching a robin singing on our garden gate. He was evidently very pleased with his own performance, and was starting it all over again when suddenly a blackbird in an adjoining garden started to sing. Immediately the robin stopped and puffing out his feathers looked in the direction of his rival, but realising that a blackbird was rather too large for him to tackle on so small a provocation, with a few defiant notes and the usual jerks of his tail he retired to another portion of the garden.

About two years ago I had a robin brought me which had been shot. Its bill was crossed like that of a crossbill and was very much hooked at the tips. The bird, however, was very fat and did not appear to have suffered in any way from this malformation.

Penzance, January 7, 1901. ARTHUR W. HEXT HARVEY.

In my ignorance I did not know that some still look on the robin as a bird of evil omen, till a near neighbour talked to me in a most serious and troubled state on the matter. One autumn some robins would persist in paying his son unusual attention. They hopped about the machine, a reaper he was mending, and perched on it when at use in the field. The family felt certain something dreadful was about to happen. Shortly after this the son's wife became "onsensed," *i.e.*, out of her mind. I merely state the facts as I know them.

Market Weston, Thetford. EDMUND THOS. DAUBENY.
January 7, 1901.

The following account of house-loving robins may interest the readers of NATURE NOTES. A pair of robins took up their abode in the drawing-room and built a nest among the plants in a large jardinière. They did not in the least mind the presence of a large family party, nor the music and noise often going on in the room, but safely brought up their brood. When the young hatched out, the cock bird carried the eggshells and arranged them on the mantel-shelf. Not liking the look of them there, he carried them into the garden. The windows were usually left open for the birds' convenience, but when, by reason of cold or wet weather, they had to be shut, the robins would fly into the conservatory attached to the house, but not communicating with the drawing-room, through the door into the hall, and then from thence through the door into the drawing-room. They were so tame that they would sit on their host's knee and take meal-worms from his fingers as he sat by the fire. When the brood was flown, the old birds at once began to build again—this time on the curtain pole in their hostess' bedroom. The moss they required for this nest they fetched from the pots of plants on the dining-room table, going in and out of the windows undisturbed by the servants or by the party at meals. The cock bird would often perch on the top of the looking-glass in the bedroom while his hostess was at her toilet, and once when sitting there with his beak full of food, one of the children coming in suddenly startled him so that he dropped nine green caterpillars on the table and flew off, but came back in a minute or two, gathered them up and took

them to his nestlings on the curtain-pole. No one disturbed this brood and they, too, were safely reared.

There is another case too, which came within my knowledge, where two robins for many months roosted nightly in the dining-room of a friend's house. They always sat on the top of a glass shade which was fastened to the ceiling above the lamp, squeezing themselves in between the glass and the ceiling.

The inmates of both the houses mentioned were great lovers of birds, and observers of their ways. It would seem almost as if the little creatures knew instinctively who would be kind and extend hospitality to them and their young.

The Gables, Wirksworth. C. E. MEADE WALDO.

Common Bunting.—It has lately been stated that the common bunting is to be seen in some parts of England at certain times of the year and not at others. I have seen it the year through in Somersetshire and Hampshire, and here can find it any day within 200 yards of my house.

Market Weston, Thetford, January, 1900. EDMUND THOS. DAUBENY.

Snow Buntings.—My brother saw three of these beautiful birds whilst out shooting some few miles from Penzance last December. There is a wild, bleak moor in this district where they are occasionally to be met with in the fall of the year and we have found them here before. Whilst on the ground they are very agile and give one rather the idea of a sanderling, but when on the wing they have the typical bunting flight.

Penzance, January 7, 1901. ARTHUR W. HEXT HARVEY.

Birds Singing when Abroad.—A friend sends me an interesting article in which I find the following quotation: "Every migrant has a definite destination: at one end of its fly line is the land of its nativity and its resting place; at the other end its summer home. As a rule birds nest in the coldest latitudes of their range, and luxuriate after the toils of domestic life in some fruitful sunny land. No birds nest and rear a second brood during their absence from their colder habitat. *They sing the livelong day* and revel in rich feeding grounds." Is it true that they sing like this when away from us? In the heart of Africa, or wherever they may be, are the familiar notes of the nightingale, black cap, white throat, and such like, an every-day occurrence? One would suppose that most birds sung very little, if at all, when away from the land of their birth, and unstimulated by the attractions and rivalries of courtship.

Market Weston, Thetford, December, 1900. EDMUND THOS. DAUBENY.

Wood Pigeons.—As I was standing at the bottom of a deep coombe in Somersetshire, one of my brothers, who was on the top of the perpendicular rocks above me, shot a wood pigeon high over his head, which fell near where I was. The impetus when falling was so great as to cause a rushing sound like that of a rocket. The bird struck the outer branches of an oak tree and crashed through them like a large stone. When I picked it up the breast was transfixed by a broken branch of the oak as thick as my little finger. The distance fallen must have been at least 300 feet; and it was the most remarkable sight of the sort I have ever witnessed.

December, 1900. EDMUND THOS. DAUBENY.

House Martins, &c.—A friend to whom I had lent some numbers of NATURE NOTES writes:—"I notice some writers mentioning the scarcity of house martins. I think they had a disaster in the migration, as it blew a gale from the 10th to the 16th April, and the first swallows did not arrive till after this was over. The first martins came on April 29, which is a week or ten days later than usual. Last year we had forty nests under the eaves, this year six. I never knock down the old nests, the work of making a new nest being hard on the birds, as they have difficulty in making their first clay pellets stick. They repair the old nests in a very short time. Any sparrow taking a nest soon learns what dust shot in his 'inwards' feels like. It has been the worst year for migratory birds, all but nightingales, that I can remember. The fly-catchers left ten days earlier than usual."

November, 1900. EDMUND THOS. DAUBENY.

Nightjar sitting Crosswise?—A very interesting point has been mentioned to me by a young naturalist friend of mine as to whether the useful and interesting nightjar does *always* sit *lengthwise* on the branch of a tree or elsewhere and not *crosswise* as birds in general do? My friend—in whose observations I have great faith—tells me he has many times seen the bird sitting *crosswise!* I have made a special study of the nightjar and his observations are certainly quite new to me. Will the readers of NATURE NOTES who have seen this bird perching *to any extent* let me have their experiences.

5, *Glenferrie Road, St. Albans, Herts, November* 19, 1900. W. PERCIVAL WESTELL, M.B.O.U.

The Cornish Chough.—That this handsome and interesting bird runs the risk of being exterminated, as Mr. Arthur W. Hext Harvey writes, there can be no doubt. And every bird that is at all rare, especially if it be beautiful, is sure to be exterminated if those stupid, ignorant, miserable persons with or without guns are allowed to procure specimens and collect subjects for museums, large or small. This year I saw reported in a local newspaper that some fool had seen a hoopoe in Devonshire and *secured* it. A hundred years ago these birds were quite common. The golden oriole is never seen or heard now in Cornwall, nor could it be a visitor without being shot, stuffed, and put into a glass case by some idiotic person who flatters himself he knows a trifle about birds. The true student of bird life wants to see them alive amongst their trees and flowers, singing, feeding, nesting, and displaying their plumage. The Wild Birds' Protection Act, 1880, included the Cornish chough in the schedule of birds to be protected, but that Act only protected them during the close season, that is from the 1st day of March to the 1st day of August. The subsequent Acts, 1881, 1894, and 1896, extend protection to the eggs of birds, authorise County Councils to add other birds to the schedule, and to prolong the close time to the whole of the year. It would therefore appear that the Cornwall County Council can protect the Cornish chough, and I feel quite sure they would be willing to do so. County Councils have been intrusted with the powers of these Wild Birds' Protection Acts, and each County Council has its schedules of protected birds both as to close times and as to eggs. These schedules are curious reading, and I find, taking the date 1897 from *Oke's Game Laws*, fourth edition, that Cornwall prohibited the taking the eggs of the Cornish chough only, whereas Devon prohibited the taking of eggs of seventy-six birds, and extended the close time of forty-five birds to August 31. But if these Acts are not put in force of what use are they? The police are pretty sharp in *running in* persons for various petty offences, sleeping out of doors, for instance, persons not having any visible means of existence (ridiculed by Punch), and other offences having attractions for the police mind. Who, however, ever heard of anyone being *run in* for taking the eggs of a Cornish chough, or for shooting a hoopoe, a nightingale, a golden oriole, or any bird at all? The County Councils ought to see that their orders are enforced, and if one or two of these blackguards (they fully deserve the name), who shoot or *secure* rare birds, are *run in*, fined, and held up to the contempt of the public, the Cornish chough, the hoopoe, possibly the golden oriole, with many others, would be common birds. The nightingale might come farther west if he were let alone, but he excites the fervour of the idiot who *secures* him as a specimen, which *occurred* somewhere.

Woodtown, Horrabridge, S. Devon, November 20, 1900. W. F. COLLIER.

The Chough.—Respecting the note under "Selborniana" (page 203) in the last issue it may interest Mr. Harvey and others to know that this interesting bird is one of the most characteristic of the cliff scenery of Ireland, and "in no country probably does it flourish in its natural strongholds more undisturbed" ("The Birds of Ireland," by R. J. Ussher and Robert Warren). Thus, although it is to be much regretted that in Cornwall the chough is rapidly diminishing, it is pleasurable to learn that in the land of the Shamrock this interesting member of the crow tribe is more than holding its own. I understand that in Cornwall the barbarous pole-trap is employed to catch the choughs when they are feeding on the shore at low water, and that they are also driven away from their haunts by the ever-increasing jackdaws.

5, *Glenferrie Road, St. Albans, Herts, November* 19, 1900. W. PERCIVAL WESTELL, M.B.O.U.

The Migration of Woodcock.—In most of the sporting papers lately there have been articles on this subject, and nearly all have stated that woodcock never migrate in flocks but always alone. Some of the gentlemen who have written are certainly authorities on the point, and I should hesitate to disagree with them, but I think, on the other hand, there are a good many exceptions from the general rule. Not long ago I was talking on this very subject to a gentleman who has been an active sportsman all his life and has seen a lot of "cock" for some twenty-five years, and he informed me that once he saw a very large flock about the usual time of migration coming in over the sea. The flock flew over the Promenade at Penzance and alighted in some marshy ground a little distance inland. The birds were in a very exhausted condition and my informant said he could have shot literally dozens. The time of the day was just about the evening, but he could clearly distinguish the birds. I know of several other instances of flights of woodcock, all of which are clearly authenticated. The subject of migration is such a complex one, and we really know so very little about it that, I think, at present, at least, no one is in a position to dogmatise. Another sporting friend of mine, of considerable experience, says that he has seen woodcock when they first arrive walking about his garden at night (he used to live in the country in a game district) "as thick as bees," where the day before there were none. If woodcock do migrate singly, is it not remarkable that these numbers should all have come to the same place? I will conclude this note with a short extract from the Hon. Francis Robert's pamphlet, printed in 1703 (which I do not, however, quote as an authority)—"Upon a change of wind to the east about Allhallowtide, they (the woodcock) will seem to have come all in a night; for though the former day none are found, yet next morning they will be in every bush."

Penzance, January 7, 1901. ARTHUR W. HEXT HARVEY.

Green Woodpecker.—This bird is very rapidly increasing in this district, where years ago I am informed it was rather scarce. During December I was frequently out shooting, and on every occasion we saw woodpeckers, and rather curiously they were always found in marshy ground with nothing worthy the name of a tree within some distance. On several occasions we flushed them from the banks of streams surrounded by rushes. I know of an old elm near here in which a green woodpecker has bred for five or six consecutive years, and on every occasion has been successful in hatching its eggs and rearing its young.

Penzance, January 7, 1901. ARTHUR W. HEXT HARVEY.

Ivy on Trees.—I really hope that you will not allow this important subject to drop until it has been threshed out, and, I fondly hope, an ancient unfounded prejudice abandoned. The beauty of the country lanes in winter depends solely on the luxuriant foliage of the ivy, and those who, like your correspondent, Mr. Millard, destroy it, have very much to answer for in an æsthetic point of view. If ivy injures the tree that supports it, it must be in one of three modes—sucking the sap from the tree to feed itself, depriving the roots of the necessary moisture, or strangling the tree by twisting round it. The first Mr. Millard has proved to be non-existent, or the beautiful parasite would not have died when he ruthlessly cut it: that it is harmless to the roots of the tree is obvious to anyone who will examine its own roots—they will be found to descend perpendicularly, whilst those of the tree spread far and wide, perhaps to double the extent of the branches horizontally. The third charge is equally unfounded, since, excepting, possibly, one turn to get to the sunny side, it runs up the tree straight, never embracing it. Mr. Millard asks, "Can any correspondent mention trees that have preserved their vigour as well with as without ivy?" If, when in town, he would favour me with a visit, half an hour from London, I shall have pleasure in showing him a dozen or two old trees, some covered with ivy, some bare, and I am certain he will admit that there is no difference in their health or appearance. I daresay you have subscribers to NATURE NOTES living here. Let anyone walk along the beautiful lane that divides the "parks," and he will see hundreds of trees, some with, some without ivy on them, and I feel confident that he will agree with me that there is no appreciable difference between them.

Nascott House, Watford. GEORGE ROOPER.

Ivy.—One of three average-size oak trees growing in my garden has been practically smothered in ivy for thirty years. I have always left it untrimmed as a shelter and home for the birds. The tree appears at the present time quite as healthy as the other two. Speaking of birds, I wish that all who can would keep a constant supply of fresh water through the winter for the birds to drink and to bath in. No matter how severe the weather is, birds love bathing. A wooden or metal trough, say four inches deep to hold two inches of water, is easily made. It should be large enough for three or four birds to splash about in at the same time. My birds are *never* without this luxury and necessity. In the severe weather I boil enough meal at a time to make a bucketful, and instead of half an ounce of crumbs between a hundred birds, they get a hearty good breakfast every morning.

Chepstow, December 18. F. H. WORSLEY-BENISON.

SELBORNE SOCIETY NOTICES.

Council Meetings.—The next meetings of Council will be held at 20, Hanover Square, W., on Tuesdays, February 5 and 19, and March 5 and 19, at 5.30 p.m.

Field Club.—After the Council Meeting on February 19, at 6.15, there will be a meeting of the Field Club Committee. All *members* of the Selborne Society interested in the Field Club Rambles are *particularly* requested to attend this meeting.

The Council begs to acknowledge, with thanks, the receipt of seven lantern slides of Selborne Church and Churchyard, and of Gilbert White's grave, from R. Marshman Wattson, Esq.; of the following donations:—Miss de Winton, 2s. 6d.; Mrs. Lowther, £1; Geo. Stanton, Esq., 2s. 6d.; Mrs. Slack, 5s.; and of the following subscriptions over 5s.:—Miss de Winton, 10s. 6d; John N. Powell, Esq., 10s.; Miss Brodrick, 10s.; John S. Comrie, Esq., 10s. 6d.; Mrs. J. V. Eden, 10s.; Mrs. S. D. Lomer, £1; Miss Ellen S. Lomer, £2; Mrs. Turle, 10s.; Lady Simeon, 10s.; W. I. Carver, Esq., £1; W. J. Stillman, Esq., £1; Miss E. Nicholl, £1; Miss Brand, 10s.; Miss J. Brand, 10s.; Mrs. Minet, £1; Hon. Mrs. E. V. Boyle, 10s.

The following new members have joined:—Frank Hayward, Esq., Camera Society; Miss Horton, Brentwood; Miss Ethel Stevenson, Stoke Poges; Wm. Narramore, Esq., F.L.S., Liverpool; Miss Lily Stoke, Croydon; R. Hovenden, Esq., F.S.A., Croydon: Douglas Kestin, Esq., South Norwood; Miss H. C. Sturton, Croydon; Miss C. Upton, Southampton Row, W.C.; Mrs. Brebner, Croydon.

Report of the Field Club for 1900.—In presenting their report for 1900, the Committee of the Field Club have great pleasure in stating that the past season has been most successful. Twenty-two rambles were arranged, and only one had to be abandoned through inclement weather. The Committee desire to express their best thanks to those who organised the various excursions, and also to the following friends who kindly provided tea:—Dr. Lionel Beale, May 26, Weybridge; Mr. and Mrs. Bosworth Smith, June 30, Harrow; Mr. and Miss Ward, July 7, Weybridge. Short accounts of each ramble have appeared monthly in NATURE NOTES.

1900.			*Guide.*
April 21	...	Highbeach	Mr. C. Nicholson.
,, 28	...	Chislehurst	Mr. A. B. Wilkinson.
May 5	...	Kew Gardens	Prof. Boulger, F.L.S., F.G.S.
,, 12	...	Woldingham	Miss Wade.
,, 19*	...	Sanderstead	Mr. Duff Smith.
,, 26	...	Byfleet	Dr. H. Willson.
June 9	...	Bromley and Chislehurst	Mr. Mühlberg.
,, 16*	...	Coulsdon	Mr. E. E. Martin, F.G.S.
,, 23	...	Farningham	Mr. A. B. Wilkinson.
,, 30	...	Hendon and Harrow ...	Mr. E. A. Nash.

* These rambles were arranged by the Croydon Branch.

1900.			*Guide.*
July 7	...	Weybridge	Miss Ward.
,, 14	...	Epping Forest	Mr. L. B. Hall.
,, 21	...	Holwood Park	Mr. G. Clinch, F.G.S.
,, 28	...	Broxbourne	Mr. C. Nicholson.
Aug. 11	...	Uxbridge and Denham ...	Mrs. Percy Myles.
,, 18*	...	Croydon (Whitgift Hospital and Carshalton ...	Dr. J. M. Hobson, B.Sc.
,, 25	...	Oxshott	Mr. A. B. Wilkinson.
Sept. 1	...	Epping Upper Forest ...	Mr. L. B. Hall.
,, 8	...	Teddington	Miss Cadman.
,, 15*	...	Godstone	Mr. E. A. Martin, F.G.S.
,, 22	...	Leatherhead	Mr. A. B. Wilkinson.
,, 29	...	Ranmore and Westcott ...	Prof. Boulger, F.L.S., F.G.S.

* These rambles were arranged by the Croydon Branch.

Selborne Saturday Afternoons:—

Saturday, January 18.—In spite of a dense fog, forty-nine members assembled at St. Paul's Cathedral. Canon Scott Holland being unfortunately unwell, Minor Canon Gilbertson kindly acted as conductor, and gave an admirable summary of the history of the three cathedrals that have existed on the same site. After service the party were entertained at tea in the Chapter House by Canon Scott Holland, and voted their visitors' fees to the Maurice Hostel, of which the Canon is President.

Saturday, February 9.—**S. Bartholomew's the Great, Little Britain.** Meet Mrs. Percy Myles at 2.15 at the West doorway. The Rector, the Rev. Sir Borradaile Savory, has kindly undertaken to conduct the Selbornians round the church. Nearest stations, Farringdon Street, Met. Railway; Viaduct, S.E.C.R.; and Post Office, C.L.R.

Saturday, February 23.—**Natural History Museum, Cromwell Road, S.W. (Mineralogical Department).** Meet Mrs. Percy Myles in the Central Hall at 2.15. Mr. L. Fletcher, F.R.S., Keeper of the Department, has kindly consented to give a demonstration on precious stones.

NEWS FROM THE BRANCHES.

Croydon and Norwood.—On December 6 Dr. J. M. Hobson, B.Sc., delivered a lecture on "The Whitgift Hospital" in Croydon, which is thought to be in danger of demolition. On January 3 the Rev. E. S. L. Buckland lectured on "The Science of Poetry and Religion." On February 7 Mr. Keatley Moore, B.A., Mus. Bac., will lecture on solar physics, and will deal with some recent discoveries. Mr. Keatley Moore observed the last two solar eclipses from India and Spain respectively.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 56, Mount Ararat Road, Richmond, Surrey.; letters connected with the business of the Society, enquiries as to the supply of the Magazine, subscriptions, &c., to the Secretary, A. J. WESTERN, Esq., 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 135. MARCH, 1901. Vol. XII.

SELBORNIANA.

Annual Meeting and Conversazione.—The President has fixed the evening of Thursday, May 16, for the annual meeting and conversazione. Further particulars will be duly announced; but this early intimation of the date is given so that members may keep themselves disengaged.

The New Forest in Danger.—We hear from the village of Lyndhurst that sometimes, like the frog that tried to rival the ox, seems to think itself a town, that there are new proposals as to a light railway, electric light and other cockney abominations that threaten the amenities of the New Forest as a national home of beauty and repose. Fortunately, anybody can lodge a protest against a light railway scheme; but forewarned is forearmed, and it may be necessary, if anything more is heard of these egregious philistinisms, to invoke the assistance of the Amenities Committee of Parliament.

Alleged Sport.—Under this title our contemporary, *The Morning Leader*, recently published the following leaderette:—

"The King has already shown, on more than one occasion, that he is no worshipper of precedent, but can make a precedent for himself when necessary. It is to be hoped that he will see fit to put down that debased form of alleged sport, dear to Cockney tradesmen learning to ride, known as 'stag-hunting.' A more correct description is tame deer hunting, and the quarry has often to be pushed or dragged along the road before its pursuers can induce it to spike itself on some fence or railings. The Rev. J. Stratton, of Wokingham, who has consistently, and persistently, denounced this cowardly barbarity, states that he knows positively that the late Queen was strongly opposed to 'stag-hunting.' We can well believe it—and we cannot imagine that the King can look with approval on this vulgar parody of sport. Queen Alexandra's love of animals has been known and read of by all men for many a year, and surely she must regard the performances of the followers of the Royal Buckhounds with scorn and detestation. A word from the throne would end the miserable and disgraceful business."

In a subsequent article the same paper continues—

"There will before long be an unusual chance of doing away with that cruel and contemptible parody of sport known as the King's Buckhounds, for when the Civil List is revised an item of £15,000 for this purpose will be open to attack. We hope the opportunity will not be neglected . . . . We have a chance of removing an item from the Civil List . . . . and while saving money also removing an odious scandal."

Scapa.—We have received a circular letter from Mr. Richardson Evans, enclosing a statement of accounts as to the present position of the excellent society with the unfortunately long name of which he is honorary secretary. From this it appears that the efforts of the society in checking the abuses of public advertising have met with a considerable measure of success so far as the action of the London County Council is concerned; but that the funds placed at the disposal of the society are wholly inadequate for the proper carrying on of its work. This complaint is, alas, one in which many other societies must sympathise.

The South-Eastern Union of Scientific Societies.—The Annual Congress of this Union, to which the Selborne Society is affiliated, will take place at Haslemere, Surrey, on June 6, 7 and 8, under the presidency of Mr. G. A. Boulenger, the eminent herpetologist of the British Museum.

Penny-farthing Parrots.—We take the following from a recent issue of the *Daily Mail*:—

"There was what the Society for the Protection of Birds might have called a great feast of ornithological death at the Commercial Sale Rooms in Mincing Lane yesterday, when thousands and thousands of bird skins—skins with all the feathers attached to them—were disposed of under the hammer to the wholesale merchants.

"Messrs. S. Figgis and Co. had 2,151 female birds of Paradise, and 480 'various,' while Messrs. Lewis and Peat had 847 more, and Messrs. Hale and Son 531. The latter had also, among other items, 1,181 Impeyan pheasants, and osprey feathers, parrot skins, jay skins, crested pigeons, owls, and other varieties were for disposal in large quantities . . . . The market in these commodities is at present rather high. Birds of Paradise went off in big batches, fifty or sixty to a lot sometimes, at from sixteen to twenty-four shillings a skin. Crested pigeons were cheaper; 225 of them were reserved at 3s. 6d. each, but these were only heads and necks. Parrots were cheapest. A thousand of lately deceased pretty pollies went off like hot cakes at 1¼d. each."

The Spread of Humanitarianism.—*Lady* (to chimney-sweep): "Well, Mr. Smuts, are you going to make your little boy a sweep too?"

Mr. Smuts: "Well, no, ma'm. It's such rough, dirty work, you see, ma'm, and he's that fond of dumb animals that I think of making a butcher of him, or a horse-slaughterer."—*London Comic Paper*.

THE UNITED DEVON ASSOCIATION.

THERE is a tradition that in the days before the introduction of the steam engine, prosperity reigned supreme in Devonshire. Strings of mules, laden with different kinds of woollen cloths or with Southern fruits, might be seen upon the roads leading from the inland and maritime towns to Exeter. Cary, writing in 1793, describes the county as being rich in minerals, marbles, timber, fruit, game, fish, "pill corn, wild madder and woad," and he gives a list of the most remarkable places, extensive views and situations, and draws particular attention to "a spring called Laywell, near Torbay, that ebbs and flows, never freezes, is very transparent and sometimes bubbles up like a boiling pot twenty times an hour."

The woollen factories are closed, the Southern fruits are no longer carried in packs, and most of the old hostelries, in which the jolly hosts kept some Newfoundland port and much good Devonshire cheer for their wealthy patrons, have disappeared; but the pleasant prospects, the remarkable places, the extensive views and the situations for the most part remain, unspoilt by the speculative builder.

About three years ago, it entered into the mind of Mr. Richards, of Exeter and Riversdale, Torquay, that as the beautiful scenery of Devonshire is not improved away, as has been the case in some counties, the wealthy patrons might yet be found in tourists and persons anxious to live in what a poetical author once described as the sub-alpine district of the West of England. Emboldened by this thought, Mr. Richards originated a Society which he has styled the United Devon Association.

The aim of this Association may be described as commercially philanthropic, but strongly influenced by Selbornian feeling.

By the efforts of the General Managers of the Great Western and South Western Railway Companies and the proprietors of coaches, facilities have been obtained for visiting the objects of interest described and depicted in the "Book of Fair Devon" issued by the Society, and it now only remains to provide that kind of accommodation required by the visitors whose patronage Mr. Richards is so desirous of obtaining.

In many parts of the Continent, the small proprietors having unlimited faith in the money value of the beauty of the neighbourhood, build and equip their hotels and then secure the visitors, but in our own country this bold speculation meets with little favour. In spite of the success attending, for example, the efforts made in the Black Forest, particularly at Freiberg, and the common opinion amongst English and American tourists that more comfort can be obtained in hotels erected and managed on the Swiss system, our hotel companies persist in building and conducting hotels on certain lines which are not

to the taste of the class of tourists sought by the United Devon Association. The course pursued last year by some well-known "smart" people, who being anxious to make themselves comfortable in Cape Town, sent over a Swiss hotel manager to establish there a second Schweizerhof, may be taken as a proof of my assertion.

"The Book of Fair Devon" has been much improved by the introduction of some good photographs, but some of the process block sketches should be replaced, when funds permit, by others of more decision and clearness.

The Association includes the Lord Lieutenant of the county, Lord Clinton, as President, Lord Clifford, who is so distinguished for his varied attainments and wide sympathies, as its Chairman, and all the principal noblemen and landowners in the county, as well as the Mayors of the chief towns and many of the inhabitants interested in natural history, art and archæology.

I venture to bring this short notice of the United Devon Association before the Selborne Society, in the hope that there may be a hearty co-operation between the two Associations. I should like to lay great stress on securing some sort of instruction in our elementary schools, calculated to make our children observant, thoughtful and sympathetic, and to implant in them a strong sense of duty to God and their neighbour and a will to do it. I am perfectly well aware that the elementary teachers are very anxious to do their utmost in this direction; but to my mind they are overweighted and overpaced, and have no time for acquiring that wide general knowledge of persons, places and things, so essential to successful teaching. As matters stand, children earn the grant, and unless they attend exceptionally good evening schools, forget nearly all the knowledge they displayed at examinations, and by the time they arrive at twenty have a perfect jumble of ideas. I received five letters last week from persons educated in National or Board Schools, all containing most curious blunders. In one, the writer, in an excellent civil service hand, stated that she had "lefted Reading and Basingstoke." Not long ago a very intelligent boy of sixteen told me that he was leaving his place in a factory because the industry was a "declining one" and that his father was afraid of his going into a consumption.

As far as my experience goes there is none of this muddle-headedness in Switzerland, where the teachers, having thoroughly grounded their pupils, proceed to expand their minds by active intellectual recreation, instead of dragging them off by early trains for aimless wanderings in popular health resorts, and returning them, at a late hour of the night, worn out by "our annual excursion." The Swiss children probably start by steamer, visit some spot of historical interest, ascend to an Alpine wood, have their dinner at noon and then sing part songs. In the cool of the day they climb to the foot of some mountain, and after wandering fancy free in search of flowers, listen with

pleasure to a simple little lecture, and quietly stroll down to their head-quarters for the night, where after supper they have a dance. The excursion lasts three days. The result of this training is that, when they grow up, they cultivate, rather than destroy, wild flowers: they have a marketable knowledge, are disciplined and courteous. I make these remarks, because it will be seen in the Annual Report of the United Devon Association that Lord Clinton has undertaken to direct the attention of the Devon County Council to supplement the efforts of the Association to enforce the County Bye-laws for the protection of Natural Objects.

It is sad that these Bye-laws should be necessary, and I trust that the day is not far distant when they will fall into disuse.

The endeavour to obtain a willing protection has always been and I trust always will be, the aim of the Selborne Society, and I think that it is in this direction that the Members of the Society in Devonshire can render the most effectual aid to Lord Clinton's Association.

GEORGE A. MUSGRAVE, F.R.G.S.
V.P. Selborne Society.

PARRAKEETS THAT MAY BE BRED AND WINTERED OUT OF DOORS.

* Will agree all together in one aviary.

† Temperament doubtful. Some will agree in the general aviary, others are quarrelsome, and have to be put up alone or they would work mischief.

All these would do well in England if turned out in May or June, but would require penning up for a time. If they were required to remain in the locality they should be kept in an aviary for a year or more, and then if a door is left open they would probably stay and breed in any trees at hand, coming fairly regularly to their old quarters for food. If they were to become at all numerous they would do a lot of damage in our English woods, but the present demeanour of sportsmen precludes any possibility of that. The descriptions here given are not by any means complete, simply sufficient to give an idea of general colour and appearance; all measurements herein given are from tip of beak to tip of tail. I could have quoted many anecdotes of my own and others, breeding experiences but space forbids. The list might easily have been longer, but I have confined it to those species usually on the market.

Cockatoos of all varieties would also succeed under the same circumstances, but they would require a brick shed and stout wire flight to confine them, their powerful beaks would readily bite through ordinary wire netting.

‡ Must each have a separate aviary to themselves.

THE following may be kept out of doors all the year round, but they must be turned out in May or June, then they become acclimatised and able to bear winter's colds and frosts when they arrive. It is useless to purchase them in autumn and then turn them out; they will only die unless they have been previously kept out of doors.

For the aviary any structure will do that is sheltered on the north and east. It must consist of shed and flight, the flight to have one-third of its roof-length boarded and felted, the other

Small Barrel Hung Sideways.

two-thirds, whole of the front and end to be covered with ½in. wire netting; it must be suitably furnished with branches and log nests or small barrels (hung sideways) both in the shelter and under the boarded roof of flight. There must be a vessel (earthenware) large enough for bathing in the open part of flight, and a fountain for water. I consider an aviary for a single pair should be at least 6 ft. long, though two or three pairs would do in that space, whilst for, say, seven or eight pairs it should be at least 20 ft. long by 7 or more ft. wide. They usually take a year to settle down before breeding.

Foods to cover all kinds named if kept in a mixed aviary; canary, millet, hemp, sunflower and grass seeds, with oats and maize, which must be in separate seed pans, placed on the ground under, or preferably suspend from the roof of covered part of flight. Cuttle fish bone, grit, mortar rubbish, green food and fresh water must be regularly supplied. For green food give groundsel, grass in flower, chickweed, lettuce, mustard, cress (*not watercress*), &c. Some will require a little fruit, this I will indicate in list; hemp should be offered principally in winter and cold wet weather, grass seed should be given at intervals as a delicacy, also a few insects to those that will take them.

* The Budgerigar (*Melopsittacus undulatus*). A native of Australia, its principal colours are bright greens and yellows with undulated blackish markings on its upper parts, and several small patches of ultramarine blue on the sides of the face. Sexual distinctions: the cere of the male in the breeding season is blue, that of the female light reddish-brown.

It is gregarious; any number (provided sexes are equal) will agree together and breed as regular as canaries. Size 7 to 8 in. long; slenderly built.

* Madagascar Love-bird (*Agapornis cana*). Commonly called by dealers grey-headed love-bird. It is a native of Madagascar. It has been introduced into, and become common in, neighbouring islands; breeds readily in captivity, hardy and long-lived,

but does not readily become tame. The principal colour is deep green, the male only has the head and breast silver-grey (hence the dealer's name), the female is practically all green. Size 7 to 8 in. long; stoutly built.

The Cockateel (*Calopsittacus novæ-hollandiæ*). A native of Australia; is rather soberly clad in deep ash grey, paler underneath; a white curved band extends from the shoulders over the greater wing coverts, ear coverts brick red. The male has the sides of the face primrose yellow. Sexual distinctions: the female is minus the primrose face of the male, hers being grey more or less suffused with yellow; the under side of her tail is yellow and white on grey ground, that of the male is black. They nest in the holes of the branches of native trees, and feed principally on the native grasses. Two broods are produced in the season, but in the aviary they breed all the year round, except during the moult. Hardy, long-lived, docile, soon become tame. Size 12 to 14 in. long; stoutish build, but length of tail gives a slender appearance.

* The Turquosine (*Neophema pulchella*). Natives of Australia, where they nest in the hollow branches of trees and feed principally on the seeds of the native grasses.

This is a very handsome parrakeet, principally green and blue above and greenish yellow below; forehead, eye stripe, shoulders and lesser wing coverts greenish-blue; head, neck, back dark green; outer tail feathers spotted with yellow; primaries and secondaries intense blue on their outer but dark brown on their inner webs; throat and upper breast yellowish-green; lower breast, abdomen, under tail coverts light orange-yellow; beak and legs dark brown. Sexual distinctions: the male has a patch of red on each shoulder which is absent in the female. The young also have this distinction in their nest feathers. Size 12 in. long and of slender build.

† Blood-rumped Parrakeet (*Psephotus hæmatonotus*). While not so gorgeous as some of its congeners it is of a beautiful appearance; head, neck and breast emerald green, the green of the neck and breast being suffused with yellow; wing coverts blue green tipped with yellow giving two curved lines across each wing; shoulders blue; flights dark brown, with outer webs bright blue; back brown-red; rump blood-red; abdomen and vent bright yellow; tail centre feathers green merging into blue; side feathers white and bluish; beak horn-colour; legs brown.

Natives of south and south-east Australia, where they nest in the spouts and branches of the gum trees (*Eucalypti*) spending most of their time on the ground searching for grass and other seeds, not refusing any insects they come across. The eggs usually number five or six. Size 12 to 13 in. long and stoutly built.

† The Rosella (*Platycercus eximus*). Natives of Australia, where they nest usually in the hollow branches or trunks of gum and acacia trees. Breeding season October to January;

five to nine eggs are laid. It feeds on various seeds, mostly grasses and insects, grubs and caterpillars.

Its gorgeous plumage is very difficult to describe briefly. The head, back of neck, face, breast and under tail coverts are rich crimson ; chin and throat white ; upper back, wing coverts and flights black with yellowish green margins ; back and upper tail coverts bright grass green ; shoulders and middle of wing blue ; upper abdomen yellow, lower pale green ; beak light horn-colour ; legs brown. Sexes are practically alike ; the plumage of the female is not quite so intense in colour as that of the male, she is also of slighter build, but their ages must be similar for this to be a safe test. Size 12 to 13 in. long and stoutly built.

The Mealy Rosella (*Platycercus pallidiceps*). A lovely species, natives of east Australia, having nesting habits, &c., same as the Rosella (*P. eximus*). Briefly : Head and face are yellow ; neck and back black edged with yellow and green ; wing coverts and flights mostly blackish-brown with blue outer webs ; shoulders bright blue ; rump blue-green ; tail centre feathers greenish-blue, outer feathers blackish-brown and deep blue ; breast, abdomen and under side of tail greenish-grey : under tail coverts crimson ; beak light horn-colour ; legs dark brown. Size 12 to 13 in. and stoutly built.

‡ Pennant's Parrakeet (*Platycercus elegans*). A native of Australia. It builds in holes in the gum trees, usually choosing those growing on hill sides, with rank grasses and brushwood underneath, and feeds on grass seeds, berries, and when obtainable insects, grubs and caterpillars. Its breeding season is from September to November, when it lays from four to seven white eggs.

It is very beautifully attired ; the head, neck, breast, abdomen and rump are brilliant crimson ; back and scapularies black with crimson margins ; cheeks and shoulders and greater wing coverts blue ; primaries, secondaries and outer tail feathers black with blue outer webs ; central tail feathers blue-green ; beak horn-colour ; legs dark brown. Size 14 to 15 in. long, stoutly built. They have been bred out of doors in Yorkshire, which is one of the coldest and bleakest of our English counties.

* Blossom-headed Parrakeet (*Palcornis cyanocephala*). This lovely Indian species is found on the Himalayas, in Central India and Ceylon. The male has the head reddish-purple ; a black band or collar extends from the lower mandible round the ear coverts almost to the back of the neck, followed by a yellowish ring ; its upper parts are principally green ; tail blue, with outer feathers tipped with yellow ; under parts green, lighter and more yellow on abdomen, sides and vent ; upper mandible orange-red, lower black ; legs and feet blackish lead-grey. The young do not assume full adult plumage till second or third year. This applies to most of the larger parrakeets.

It should have in the aviary a little fruit, bananas, sweet apple or pears, grapes, &c., not altogether, but varied almost daily. Size 10½ to 12 in. long, stoutly built.

¦ Ring-necked or Bengal Parrakeet (*Palæornis torquata*). This is so well-known as not to need description. The male only has the ring, the female is clad almost entirely in green. It frequents the cultivated districts of India, Ceylon and Cochin China. It is regarded as a nuisance by the farmers, owing to the marauding visits it pays to their growing corn. Hardy, very noisy; some specimens learn to talk very intelligibly, but they are terrible screamers. In London think of the neighbours! It should have a little fruit, boiled potato or raw carrot, and in season green peas, in addition to its seed menu. Size 14 to 15 in. long, of which the tail measures 5 in.

‡ King Parrakeet (*Aprosmictus cyanopigius*). A lovely south-east Australian species, found principally in New South Wales, where it does a deal of damage to the growing corn (as it frequents the neighbourhood of cultivated districts), consequently the farmers regard it with little favour; with them its great beauty does not cover its sins. It should have boiled oats and maize when rearing young. Size 14 to 15 in. long; stoutly built.

WESLEY T. PAGE, F.Z.S.

IN A HERTFORDSHIRE LANE.

IT is near the middle of "merrie" May, three hours before sunset, and we find ourselves in one of the quiet, secluded leafy lanes of beauteous Hertfordshire. It has been a day tempered with brilliant sunshine, and all Nature seems pleased. Turning round the corner out of the main road, by the time-worn sign post, the main post plastered with an auctioneer's announcement of a sale at a neighbouring farmhouse, we are safe from interruption, and can hear and watch all that is going on. The first thing which attracts our notice is a robin redbreast hopping in front of us, turning his head first one side and then the other to see if we are peeping into that grassy tangled bank or that clustering ivy bower for the nest. Then, in the tall trees above us, the little wood wren, in his green and gold livery, treats us to a delicate warble and then off to the next giant forester on the other side of the lane, for on the left it is woodland.

Skirmishing through the tall trees a few restless jays disport themselves, but our attention is distracted by an orange-tipped butterfly flying right across us. A nightingale takes up the chorus of welcome afforded us. He has surely not arrived here long—that particular bird—for he is by no means in good song yet. Those rich, mellow notes are absent that we know full well *will* come.

The hedge on the right is sheltered from the still keen winds, and here we look for, with confidence, and find nests in abundance.

It has been cut very low by the grey haired old hedgeman, but ivy clustered almost continuously, and clinging wandering honeysuckle is present in plenty. In that likely looking clump we find a hedge sparrow's nest, containing four deliciously blue eggs. Rather a large nest for so small a bird, we observe in passing. But lo, here, not a foot away in the same clump, a speckled thrush has placed its marvellous homestead. How beautifully rounded is the cow-dung interior, and how those freckled blue eggs—

> "Ink-spotted over, shells of green and blue:
> Like heath-bells gilt with dew,"

stand out against the brown ground-work of the nest.

In the young fir trees—the green tassels now in all their beauty—the rival males are singing. The cheery hedge accentor, clad in plain brown livery, is content to warble sweet and low, but king thrush pours out his rich mellow notes,

> "Tiurru, tiurra, chipiwi, too-tee, too-tee, chinchoo,"

loud and long. This is their language, and what those musical utterances mean may be rivalry on the part of the males.

Walking on, a nest of the chaffinch presents itself in a low beech. We remark that it is very rare that any bird places its nest in such a tree—at least that is our experience.

All along the hedges blue-bells are blooming, together with billy buttons, and many coloured leaves of the shooting sycamore make a fine background. We stoop to pluck one of these wild hyacinths, and in the act frighten a robin out of the tangled ivy bank. Looking carefully we find the snuggest nest imaginable—just a small hole between the fallen leaves for the ingress and egress of the bird; but pulling one or two of the leaves away with the fingers exhibits the beautifully constructed nest. It is quite ready for the red freckled eggs, which let us hope will be safely hatched, and the youngsters safely reared. Farther on two or three more hedge sparrows' nests—all with those delicately painted shells—and a fluty blackbird strikes up his alarm cry. In between a sturdy nut hazel stem we find the well constructed nest. How strongly felted together it is, so much so that no wind can shift it. Two greenish eggs, blotched with brown, we observe, then make the nest somewhat more secluded from the gangs of nest robbers, and we pass on. How the cowslips smell, they betray their presence over the side of the hedgerow. We mount the bank and a whole row of glittering yellow and dark gold meets the eye, with drooping bells of blue mingling in between.

Near here is an old tree, the stump only left. There are many holes in it, and on tapping half a dozen mimicking starlings fly out. A pair of green woodpeckers inhabit one of the holes too, and at the top, in that jagged fissure, the little tree creeper has chosen a nesting place.

We rest awhile by the old rustic gateway, and whilst doing

so listen to the feathered musicians round about us. We hear the curious love songs of three or four varieties of titmice, the blue, cole, long tailed, and great tit's; the fluty blackbird and speckled thrush; the cheery hedge-sparrow and artful redbreast; the carol of a wren, and the warble of the wood wren; the two whitethroats; the ring and turtle doves; the cawing rooks in the pasture lands, the plovers in the fallows; the trilling skylark; the abrupt song of the chaffinch, and sombre-plumed philomel. We can hear all these, and more besides, though they may not all be seen from our vantage ground.

The sun is fast sinking now, but what a glorious sunset! The sky is blue for the most part, with floating patches of light red, crimson and pink. Against this we see through the hedgerows a few swallows and martins disporting themselves, and partaking of a few more luscious insects before bed time. The yellow bunting must not be overlooked, he is far too conspicuous an ornament to our landscape to be passed over. His nest is too snugly hid to attract our attention now, especially as it is getting quite dusk.

How we know this old lane! The gipsies used to camp here regularly in our childhood's days, and just a stray party does so now occasionally. We remember where in years gone by we have found a certain rare nest, or seen a rare bird; we discuss the various changes which have taken place all too quickly. We remember when that black wood in the distance was a mere plantation, and have gradually seen those winding paths made into a well-beaten track. We well remember the hospitable old gentleman who used to keep the old farmhouse at the top of the hill, and wish we could call him back again.

A last peep into a thick holly bush, and we are just able to discern a nest full of young hedge-sparrows. There they are, five in number, all with gaping mouths waiting for another fill before the mother's tender care is finished for the day, and they nestle beneath her warm little breast. All this we see in the lane, there is no need to go out of it, for new sights and sounds crop up at every turn.

The labourer, decked out in his Sunday black, with his wife and children, the very picture of health, passes across the top of the lane and wishes us a cheery "good-night." The sun has now departed, the feathered race are all silent, the daisies have closed their eyelids, and we leave this paradise to the occupants whose life and habits have afforded us such interest and pleasure.

W. Percival Westell,
Author of "A Handbook of British
Breeding Birds," &c.

STRAY CATS.

MAY I be allowed a little space in your magazine for a few words on behalf of stray cats? In the particular suburb in which I live my sympathy for these poor unfortunate animals is continually being called forth. Perhaps it is not always the cruelty of their owners that has rendered them homeless and friendless; but in some cases I fear —nay, I know—it is. People will go out for weeks for their summer holidays, or remove from one residence to another, deliberately leaving poor pussy behind, to starve, or be worried by dogs, or tormented to death by mischievous boys, for aught they care. Perhaps no animal is more dependent on the warmth and shelter of the home than the domestic cat; and my experience shows that no animal is more intelligently and affectionately grateful for kindness received when left destitute. At the present time I have no less than four cats (besides our own old family one, Tim) which have come to me as waifs and strays; and each has its own interesting and pathetic history.

The first one, a fine old tabby, was very wild and savage when he first began to haunt our garden, and had acquired a bad reputation all round the neighbourhood for stealing. He seemed a feline Ishmael, his hand against every man, and every man's hand against him. He was suspicious of all the human kind, and consequently very slow to appreciate and trust my friendly advances. When I called him, in the most gentle and coaxing tones, or tried to get close enough to stroke his shaggy fur, he would spit and snarl at me most fiercely. Even when I brought out little dainties to offer him in the way of food, he would eye my movements from a distance with a suspicious curiosity which might have become Vergil's Laocoon when gazing at the fatal wooden horse, and uttering those warning words,* "Quidquid id est, timeo Danaos et dona ferentes." But gradually, under the softening influence of continued kindness, pussy lost his distrust, and showed a most grateful and affectionate disposition, which had only been obscured by long neglect and unkindness. Nothing pleases him better now than to be nursed on our laps, and to eat from our hands. Nevertheless we have christened him Diogenes, both on account of his original cynicism, and also because of the tub that we have arranged in an outhouse for his accommodation during the nights.

Time and space would fail me to tell of Brownie, and Topsy, and Kitty, not to mention the little tabby for which I succeeded in finding a home a few days ago. But will the members of the Selborne Society interest themselves in stray cats, and use all their influence to prevent the desertion of these poor

* Æn. ii. 49.

animals? Perhaps something more might be done than has hitherto been attempted in the institution of Homes for Stray Cats, as well as for stray dogs. Should these lines in any way contribute to such an end, I shall be more than repaid for penning them. PHILÆLURUS.

REVIEWS AND EXCHANGES.

A Practical Guide to Garden Plants. By John Weathers, F.R.H.S. Longmans. pp. xii., 1192. Price 21s. net.

It is not every pocket that can afford the price or every library that has the space for Mr. Nicholson's classic "Dictionary of Gardening"; but the requirements of the present excellent work are more moderate in both respects. Mr. Weathers has economised space by omitting illustrations, with the exception of some in the text of his glossary, and the scope of his work is strictly limited to hardy plants; but we do not know of any one volume which deals in anything like as complete a manner with the subject. After the glossary comes a most accurately written sketch of the general physiology of cultivated plants. Then follow lists of plants suitable for various situations; over 800 pages devoted to the systematic description of the orders, genera and species of the plants of the flower garden; grasses, conifers and ferns occupying about 75 pages; the fruit garden, its operations and its occupants, about as much; and the kitchen garden nearly an equal space. An index of 22 pages, printed in four columns, renders the work most easy to consult for anyone who is not familiar with the natural system of classification. Had space permitted we had intended quoting some excellent remarks on plant names from Mr. Weathers's preface, though in calling the saxifrages "rockfoils" we do not think he has been quite true to his principle of not coining new popular names; but it must suffice to say that, with the help of the most competent authorities, Mr. Weathers has produced a volume which every gardener will find of value to him.

An Annotated Catalogue of Edible British Fungi. By E. W. Swanton, Conservator to the Haslemere Educational Museum, Member of the British Mycological Society. With six hand-coloured plates, comprising fifty-two figures, by E. W. Swanton and Miss Mosley. The Museum Press, Lockwood, Huddersfield. Price 2s. 6d. net.

Though we are doubtful as to the wisdom of the attempt to learn the edible and poisonous British fungi *separately*, this unpretending little brochure is well calculated to serve as a guide to the plants it describes. It is more free from misspellings than is usual in books of its class: the descriptions, although concise, seem to be adequate; and the illustrations, although wanting in roundness, will certainly be of some assistance towards identification.

Laws Regulating the Transportation and Sale of Game. By T. S. Palmer and H. W. Olds. U.S. Department of Agriculture, Division of Biological Survey. Bulletin No. 14. Washington, 1900.

This useful digest of the game laws of the United States deals with big game as well as with birds, and gives in tabular form the close seasons for Canada as well as those of the States. The want of uniformity in these laws is illustrated by nine diagrammatic maps.

Report of the Hampstead Scientific Society, 1899-1900. S. C. Mayle, Hampstead. Price 3d.

This handsomely-printed but somewhat too tall report of the first year's existence of a new society tells a satisfactory tale of a good start made. Unfortunately the most serious difficulties of scientific societies are not those of their initiation, but those which arise when, after a few years, zeal begins to flag. Far be it from us, however, to prophesy ill concerning the Hampstead Society.

Received:—*The Naturalists' Journal* for January and February, *The Naturalist*, *The Irish Naturalist*, *Knowledge*, *Science Gossip*, *Humanity*, *The Animal's Friend*, *Our Animal Friends*, *The Animal World*, and *The Agricultural Economist* for February.

NATURAL HISTORY NOTES AND QUERIES.

Bats in Winter.—Last month I wrote in NATURE NOTES that I had observed a bat in the dusk of the evening of December 8. I should like to add that on December 26 I observed two bats hawking for insects in Westgate, Peterborough, in the dusk of the evening. The question arises whether these bats had been torpid. I have an impression that generally when bats are observed in winter, it is more in the daytime when the temperature is highest. I find I have an entry under January 28, 1898, of a bat being seen by myself, but unfortunately I have not stated the time of day.

Broadway, Peterborough. W. H. BERNARD SAUNDERS.

How Rats carry Eggs.—Does it ever occur to those who believe that a rat is content to lie on his back with an egg in his paws, and to be dragged along like a little truck in order to convey the egg to its destination, that this would be painful for the small conveyance? It would involve that rubbing up the hair the wrong way which is always recognised as an irritating process for man or beast. The belief is a very old one; but has any one seen the feat actually being performed?

7, *Holmesdale Road, Kew.* EMMA HUBBARD.
February 8, 1901.

The venerable "chestnut," a rat doing wheelbarrow, and allowing himself to be made a vehicle for the transport of an egg, is, to my personal knowledge, quite eighty years old. I remember reading it when a small boy!

How the rat moves the egg I am not prepared to say; but *if* he *does* move it, I would suggest that he does so by pushing it along with his snout.

GEORGE ROOPER.

P.S.—Crows and rooks carry eggs away by striking the lower mandible of the beak through the shell and closing the upper mandible gently on it. The rat, however, could not adopt any similar plan, his teeth being too sharp and his mouth too small.

Nascott House, Watford.
February 7, 1901.

Moles.—A good many years ago I saw a dachshund try to catch a mole. Your dachshund is a pretty good digger, but the mole dug himself in much faster than the dachshund could follow. I have twice had the luck to find a mole crossing a hard road or path, where he is helpless. The squirming of a live mole in one's hand is out of all proportion to the animal's size, and proves its extraordinary muscular strength.

London, February 11. F. POLLOCK.

Would you, or one of your readers, be so kind as to tell me exactly in what manner, and by what method, a mole forms a molehill.

Cornwood Vicarage, A. T. MUNDY.
Ivybridge, Devon.
January 20, 1901.

Hedgehog and Mole.—Will any one tell me if it is an authenticated fact that the hedgehog is valuable as a destroyer of the sometimes too numerous mole? I saw a statement to that effect not long ago in one of the daily papers. In reading the letters in NATURE NOTES on Moles, I recalled one or two occasions on which I saw these animals above ground. Once the little grey beast scuttled across my path on Hampstead Heath and disappeared like lightning on reaching the sand and turf at the side.

E. G. W.

How to attract Tits.—In answer to the above question from "E. C. R.," I can say I have found them come very quickly to either a lump of suet, small meaty bone, or a cocoanut. The latter is what I prefer, as it lasts longer and looks much better than the bone. One now hangs from the branch of a small

tree not far from the dining-room window, and it frequently has one or two tits hard at work on it. Only the great tit and blue tit have come this winter, though the cole was about in the autumn. I cut both ends of the nut off and hang it so as to swing freely from the bough. Other birds I feed, on a table or stand made on purpose for them, with crumbs and seed. The top, which is eighteen inches square, has a narrow ledge round it to keep the crumbs on better, and a notch cut at each corner to let the rain run off. This top is fixed on a post, thirty inches high, that is let into the ground in the middle of a flower-bed, also quite close to the dining-room window. From the centre of the table a slight rod thirty-nine inches high runs up, with two small cross bars near the top for hanging nuts, &c., on. Just now I have some Brazil nuts with both ends off, and find they are very popular, a blue tit constantly being on one, swinging head downwards. In the summer the rod is taken away and pots of flowers put on the stand, which with creeping plants growing underneath to cover the post, looks quite ornamental. The whole can of course be easily taken away. Such a table costs very little, whilst the pleasure it gives to a real lover of birds is very great. It attracts our little feathered friends quickly, is a daily interest and amusement, and is an easy way of getting on familiar terms with our "sisters the birds," as St. Francis so lovingly called them.

L. K.

How to attract Thrushes, &c.—A correspondent writes to inquire what it is desirable to put in shrubs so as to attract thrushes or blackbirds to nest in them.

Early Nesting.—A member writes that there is at the present time a starling's nest with young in it in a tree in a yard in Great Ormond Street, Bloomsbury.

Skylark.—Cold and hard weather has made most of our songsters a little late this year before they commence their music. On Sunday last, the 3rd inst., I heard a skylark singing for the first time for the year, and on two distinct occasions. Perhaps this date will be useful for comparison to other readers of NATURE NOTES in different districts. The wren commenced its song (it has been silent during the fall of the year) on January 13th ult.

Penzance, ARTHUR W. HEXT HARVEY.
February 8, 1901.

Duck.—The hard weather which set in with the new year brought with it, to this district, several species of wild duck. On a pool, a short distance from here, I saw ten common Pochard, including three beautiful drakes, and a fine drake scaup in full plumage, and I believe others of this species have been shot. I have also heard of a very handsome specimen of the Shoveler being shot about seven miles away. Scaup are rather scarce in this district, only a very few being obtained every winter. The Pochard are still here, and when I last saw them (on the 3rd inst.) they had been joined by two more drakes.

Penzance, ARTHUR W. HEXT HARVEY.
February 8, 1901.

An Escaped Cockatoo with Flocks of Rooks.—A great amount of curiosity has been aroused in this locality by the fact that for several months past a white cockatoo has been seen feeding out on the meadows with its black companions, the rooks, and it would have been interesting and instructive to have ascertained the exact food on which it existed through the autumn and winter, until about a fortnight since, when some thoughtless idiot gave it the usual dose of shot out of mere thoughtless, cruel curiosity. I was at the trouble to write to at least half-a-dozen papers circulating in the district, to try to save its life, but failed in the end. I had interested myself very much to try to find out where it escaped, but the nearest I can make out is that one answering the description, and at a somewhat earlier date, escaped with a broken chain to its leg, as this had, from Bucks, and that it also took to the company of rooks. The probability is that it went off with fresh colonies of rooks in a morning, as in some districts—Ragley, for instance, in the Marquis of Hertford's Wood—

thousands of rooks gather for the night. The bird roamed over a district of a ten miles radius, and was reported to me from several parishes. I think these facts establish the fact that cockatoos could be acclimatised in England at liberty, and would add much interest to country life if it were not for the barbarous silly fellows who will not let a strange bird live in peace.

The Wren's Nest, Astwood Bank, Worcestershire. JAMES HIAM.

Caged Robins.—I am sure that the readers of NATURE NOTES will agree with me here. About two weeks ago while in the neighbourhood of Finsbury Park, I was surprised to see in a bird dealer's shop about half-a-dozen robins in a cage. Although the cage was roomy, it is not probable that the robins felt happy within their prison. Some of them were hopping about with wings almost touching the floor of the cage. Can anyone tell me if they have seen the same? It is the first time, and I hope the last, that I have seen our little friend as a caged bird.

Canonbury. CHARLES E. J. HANNETT.

How do they do it?—Now and then one comes across people who boast they have never changed their opinions in their lives; and when we prove them these opinions generally turn out to be of little value. The study of Natural History has taught me many things, and amongst others that preconceived ideas must be surrendered with a light heart, and that what we know to be elementary principles of physics are apparently at times brushed aside in an astonishing and unexplained manner.

It is an acknowledged law that an object floats if bulk for bulk it be lighter than water, and that the greater the disproportion the greater will be the weight or force required to cause submergence.

Now the question arises, Do certain of our birds set this law at defiance? Or do they possess some occult power as yet unknown to science?

Almost all diving birds have the power of submerging their bodies without any apparent muscular effort. The body sinks while the head and neck, or part of the bill, remains above the surface, and in this position it will remain a considerable time. During this almost complete submergence it is so absolutely still that not a ripple can be seen on the smoothest surface. This takes place irrespective of the depth of the water or of the presence of weeds, or any matter to assist in keeping the bird in position; in short, without any adventitious aid whatever. This action is not to be confounded with the habit of diving for food, which may be seen any day. In diving the body is placed in a nearly vertical position, and is then driven underneath the water by powerful strokes of the feet. In other words, diving is caused by the expenditure of mechanical force, just as flying is attained by the use of the wings.

All diving birds, when alive and undisturbed, as also do their carcases, float so lightly on the water as scarcely to make any noticeable depression in it. In order, however, that a bird may submerge its body slowly without any apparent muscular effort, one would suppose it were necessary that its weight should be greater than the water it displaces, but how this is to be brought about it is impossible to suggest. Now a large specimen of the Great Northern Diver which weighs 15 lbs. may be said when totally immersed to displace about a cubic foot of water, and a cubic foot of sea water weighs 62 lbs., more than four times the weight of the bird. Consequently in order to keep the bird beneath the water a weight of 47 lbs. or an equivalent force would be required, and to suppose that it had the power of compressing its body to less than a fourth of its size, in order to equal the weight of the water displaced, is contrary to the evidence of one's senses and quite impossible. Nor is it conceivable that a sufficient volume of water could be received into the body to redress the inequality in weight.

A dabchick has been seen to remain with only its beak protruding in a pond, and had selected some shavings about an inch long on the surface of the water, by means of which it for a long time escaped notice. The water was still and deep, and there were no weeds or such-like to which the bird could hold on with its feet.

Heinrich Gätke tells us he saw a cormorant perform the following feat in a pond at the Zoological Gardens in Hamburg. A number of swallows were

flying over the pond, and in order to catch them a cormorant submerged itself so that only the head was visible. In this position it remained quite motionless—for any movement of the feet would at once have been betrayed on the perfectly smooth surface of the water—and succeeded in capturing one of the birds, which it swallowed, after giving it several shakes in the water. It then quietly "reimmersed its body as before, to lie in ambush for further prey."

This can be corroborated by watching the movements of cormorants and other divers under suitable circumstances; and the question is, How do they do it?

Market Weston, Thetford, EDMUND THOMAS DAUBENY.
February 7, 1901.

What do Cocktail Beetles live on?—One evening in the summer I was sitting outside the house, when a crane fly settled on the ground near to me. Immediately a cocktail beetle which had been lying in concealment under the stone threshold of a doorway darted out and seized the crane fly, and proceeded to carry him off to his den. I stamped my foot within a few inches of the beetle, but he merely erected his tail and held on firmly to his prize. I stamped again and again as near to the rascal as I dare, but I inspired no fear; he merely seemed angry. At length I touched him, and then very reluctantly he dropped his prey and made off home under the doorstep. The poor crane fly, however, had been so badly injured by the beetle's mandibles that in mercy I destroyed it.

Broadway, Peterborough. W. H. BERNARD SAUNDERS.

Wasp on Christmas Day.—Mr. Thomas Diggle informs me that on Christmas Day he observed a queen wasp amongst the evergreens of a window at the east end of the south aisle of Moulton parish church, Lincolnshire. The wasp was not at all lethargic, but quite active in its movements. The weather right through autumn had been very mild, with the exception of one or two days' frost just before Christmas.

Broadway, Peterborough. W. H. BERNARD SAUNDERS.

Ivy on Trees.—Let us see what the great German and French foresters have to say on this subject. In Dr. Schlich's "Manual of Forestry," vol. iv., "Forest Protection," being an English adaptation of "Der Forstschutz," by Dr. Richard Hess, Professor of Forestry at the University of Giessen, at p. 366 I read:—"The common ivy climbs trees by means of its adhesive rootlets, which, however, suck no nutriment from the host on which it is growing, but merely support the ivy. The smaller forest variety is said not to flower, and sometimes covers the soil of a forest. Matthieu ('Flore Forestière,' 1877, p. 173) considers it hurtful to forest trees by interfering with the passage of the sap, and by covering the crowns of trees with its foliage, and it certainly at times constricts oak and other saplings and poles, like the honeysuckle. The ivy, however, rarely ascends higher than the middle of the crown of a tree, and may be useful in preventing the formation of epicormic branches on standards." Again, in "Les Forêts," by Professors Boppe and Jolyet, of Nancy, just published, at p. 306 the ivy is severely condemned. And in Chambers's "Encyclopædia," published in a land of forests and foresters and a most trustworthy publication, as I have over and over again proved, we are told that ivy injures living trees by constriction when permitted to grow upon them. So far as I am personally concerned, I have a fine lot of oaks of about fifty-five years of age in my own woods, which should grow into excellent timber for my son to cut down. I have kept their stems free from ivy, not because I feared, at their age, it would strangle the trees, but lest it should get to the branches of the crowns and interfere with the leaves of the trees acting as their lungs and nostrils and imbibing those gases which go to make growth of wood. I agree that ivy is very suitable in gardens and ornamental grounds, and in some rocky or exposed situations it is most useful in preserving beautiful old trees from destruction by wind or storm. But if a man wants to grow trees for profit, then he should take care that ivy does not get the upper hand in his plantations. I have seen very many trees whose growth has been seriously interfered with by ivy, and, to put an extreme case, it is obvious that if a man were to plant 100 small trees, say each two feet high, at the usual distances

apart, planted 100 ivy plants amongst them and left them to grow together, the result would be confusion, the trees would be throttled and distorted, and never grow to any sort of perfection.

I think, then, we may say that ivy, in its proper place, is not only pleasant to the eye, but it is also useful. When planted against trees, it should, generally speaking, be against those that are aged, or at least of mature growth. In a forest where trees are grown for profit, ivy is a nuisance, and must be exterminated.

There are other climbing plants much more hurtful to trees than ivy, but these are fortunately not so common in Britain.

Montreux, February 9, 1901. GILES A. DAUBENY.

My experience is that a really healthy tree and a luxuriant, unchecked growth of ivy are incompatible. One or the other, the ivy or the prop, must be sacrificed. I quite fail to understand how any tree "smothered in ivy" can maintain its normal health. Nothing is more essential for the development of leaves than an uninterrupted supply of llght and air, and in the case supposed both light and air are appropriated by the masses of ivy covering the boughs, there is none left for the prop. I do not deny that an ivy-smothered tree may live for a very considerable period, but I suspect that the enormous length of time necessary for properly testing this question has led to hasty generalisation. Take two healthy trees of twenty years' growth, plant ivy against one and let it grow till all the boughs of the tree are smothered in it. Because in another twenty years' time this tree is apparently as strong and healthy as the other one which is destitute of ivy, you are not justified in assuming that this is really the case: give them another forty years, and I suspect that your verdict will go against the ivy.

To buildings ivy, when allowed to ramp at will, is even more fatal than to trees. It effectually conceals any architectural features, and, what is worse, it slowly and surely destroys the masonry. From any structure that is of any higher interest or value than to serve as an ivy-prop, this pernicious and insidious weed should be most jealously banished. Nothing but the solid strength of our ruined castles and abbeys has enabled them to resist its ravages so long. But we thoroughly understand the art of destroying ancient monuments: we make them over to the ivy and—let them alone.

Beghroke, February 7. H. A. E.

Mr. Rooper's courteous castigation leaves me unconvinced and impenitent. It does not follow, I think, that no harm has been done because we may not be able to explain the manner in which it is done. I am not convinced that it is no more strain on the soil to support the tree *plus* the ivy than to support the tree alone. On one point I can speak from experience. I once cut down a holly round which, at one point, the ivy had taken a turn, and then stiffened in position so as to leave a mark as if a thick iron ring had been there. To the imputation of "having much to answer for," I demur entirely. Ivy is not a rare bird or animal which strays into one's grounds and gets trapped or shot by some "stupid, ignorant, miserable person," some "fool or idiot" like those whom Mr. Collier denounces with such refreshing vigour. I do not think I am bound to grow ivy to please other people, any more than I am bound to keep peacocks that passers-by may admire their tails. The *locus classicus*, as used to be said in our college days, on the ivy, describes it as "creeping o'er ruins old," "aye creeping where no life is seen," &c. I would not only say, "By all means let it so creep"; but also, "Let my neighbours keep both their peacocks and their ivy." If I have the bad taste to dislike the peacock's screech, if I even think a mass of ivy no more an ornament to a thriving, well-grown tree than a poncho (however prettily striped) would be to the Belvedere Apollo, I think I am entitled to hold both opinions in peace.

F. M. MILLARD.

Natural History in Fiction; and Fiction in Natural History.—I feel sure that some Selbornian with a wider acquaintance with works of fiction than I possess could write an amusing and informing paper on this subject. I myself can offer no more than a hint or two.

Sir Walter Scott, in "The Talisman," as is well-known, has a fine passage on the fidelity and sagacity of the dog. The lame duck in "The Caxtons," that hobbled after its protector, can hardly, I suppose, be a pure invention. Am I wrong in believing that Trollope somewhere speaks of ravens in a cathedral tower? The following examples may perhaps be less known.

Some years ago I read an extract from a novel in which mention was made of a cygnet by the side of its parent—the young bird, according to the author, being whiter even than the old one, though that, Heaven knows, was white enough. The writer, surely, did not know his "Ugly Duckling." Mrs. F. A. Steel, in one of her thrilling Indian stories, says that in a garden in Lucknow (she spells it in the old fashion) "squirrels loll yawning through the summer day." Under which half of my double heading this should be ranged I do not venture to speculate; still I cannot but think that Messrs. Kearton, to whom we are indebted for so many charming pictures of wild life at home, would add yet one more to their claims on our gratitude, if they could give us an authentic picture of a lolling and yawning squirrel.

It is long since I read in a novel a comparison of a bad woman roaming distractedly (I think on a river bank) to an animal sometimes seen in a menagerie moving backwards and forwards *at the end of its chain*—"the restless cavy." For the authenticity of this gem I can vouch, though I have unhappily forgotten the name of the book in which it is to be found. Let us hope that the author has by this time discovered that this fierce, chained, untamable beast is otherwise known as—the common guinea-pig.

Otham, Maidstone. F. M. MILLARD.

SELBORNE SOCIETY NOTICES.

Council Meetings.—The next meetings of the Council will be held at 20, Hanover Square, W., on Tuesdays, March 5 and 19, and April 2, at 5.30 p.m.

The Council begs to acknowledge, with thanks, the receipts of the following donations:—Ernest A. Elliott, Esq., 5s.; H. B. Kitchin, Esq., 5s.;—Culshaw, Esq., 2s. 6d.; Rev. J. E. Hall, 5s., Chas. Burt, Esq., 10s.; Earl Stamford, £2; J. E. Judson, Esq., 5s.; Edward A. Nash, Esq., 5s.; Miss Whiting, 2s. 6d.; and the following subscriptions over 5s.:—H. T. Evelegh, Esq., 10s.; Mrs. G. S. Kempson, 10s.; H. E. Luxmore, Esq., 10s.; Miss A. Garrett, £1 1s.; Miss Cheetham, 10s. 6d.; H. Chipperfield, Esq., 7s.; Miss C. V. Hall, 10s. 6d.; Bishop of Durham, 10s.; Rev. J. E. Hall, 10s.; Miss Ella Shadwell, £1; Mrs. E. Brightwen, £5 5s.; Miss Forssteen, 10s.; W. H. Maw, Esq., 10s.; Mrs. Silkenstadt, £1; H. Harpur Crewe, Esq., 12s. 6d.; Capt. Jas. Cundy, £1 1s.; Rev. F. M. Millard, 10s.; Chas. Burt, Esq., 10s.; Earl Percy, £3; J. S. Budgett, Esq. (per W. J. Martin, Esq.), 21s.; Mrs. Robinson, 10s. 6d.; Mrs. Hubbard, 10s.; Miss Agatha Walker, 10s.; A. J. Hall, Esq., 10s.; W. H. Warner, Esq., 21s.; Miss N. W. Ranken, 7s. 6d.; C. W. Ware, Esq., 20s.; C. Surgey, Esq., 21s.; Rev. W. R. Tagart, 6s. 6d.; W. C. Stapleton, Esq., 21s.; C. Blore, Esq., 10s.; J. Rawlins, Esq., 7s. 6d.

The Council have received from John Roney, Esq., 18, Wiltshire Road, Brixton, an interesting catalogue of sale of Gilbert White's house, dated 1840, together with a plan of the village, showing other properties, and a well-executed view of "The Wakes" from the lawn.

The following new members have joined:—Mrs. Richmond, Shrewsbury; North Staffordshire Clarion Field Club; Wesley Page, Esq., F.Z.S., Shepherd's Bush; Frank Rollaston, Esq., Erdington; W. D. Sang, Esq., Kirkcaldy; W. T. Richards, Esq., Torquay.

Selborne Saturday Afternoons.

Saturday, January 26.—Members of the Society met at the NATURAL HISTORY MUSEUM, South Kensington, where Dr. A. Smith Woodward gave a most interesting demonstration upon Fossil Fishes, and the thanks of the visitors are due to him for his kindness upon the occasion.

Saturday, February 9.—Twenty-two members were conducted over the church of ST. BARTHOLOMEW THE GREAT, SMITHFIELD, by the rector, the Rev. Sir Borradaile Savory, who in addition to pointing out the architectural features of the building, gave a charming account of the various personages connected with the church. As is usual on these occasions, the members contributed to the restoration fund.

Saturday, March 9.—**Church and other buildings in the Temple.**—Enter the Temple by Middle Temple Lane in Fleet Street, opposite Chancery Lane, and meet Mrs. Percy Myles in the cloisters near the church at 2.30. Mr. F. Downing, member of the Council, has kindly undertaken to act as guide.

Saturday, March 23.—**Natural History Museum (Botanical Department).** Meet Mrs. Percy Myles in the Central Hall at 2.15. Mr. V. H. Blackman, of the museum, has kindly consented to give a demonstration on xerophytic and cryptogamic plants.

NEWS FROM THE BRANCHES.

Birmingham and Midland.—The Rev. Dr. Dallinger, F.R.S., gave a lecture on January 31, at the Midland Institute, under the presidency of the Lord Mayor of Birmingham, on "Beauty Considered as a Constructive Element in Minute Nature."

ANSWERS TO CORRESPONDENTS.

C. L. Hett.—It is undoubtedly most desirable that accurate and long-continued records should be kept of the dates of the arrival of migratory birds; but we doubt the advisability of devoting any of our scanty space to isolated records.

Rev. Maurice C. H. Bird.—Unfortunately a lecture which only occupies an hour in delivery would fill many pages of NATURE NOTES.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 56, Mount Ararat Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, A. J. WESTERN, Esq., 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 136. APRIL, 1901. Vol. XII.

SELBORNIANA.

Further Change of Address.—The Editor regrets that circumstances entirely beyond his control have compelled him to again change his address, to 16, Mount Ararat Road, Richmond, S.W.

"The Life and Letters of Gilbert White."—Mr. John Murray has nearly ready for publication two volumes, demy 8vo, on the life and letters of the naturalist of Selborne, written and edited by our Vice-President, Mr. Rashleigh Holt-White, his great-grand-nephew.

Though Gilbert White of Selborne died more than one hundred years ago, no attempt has hitherto been made to compile anything which can be called a complete account of the facts and circumstances of his life and surroundings. This has certainly not been owing to any lack of curiosity about his career on the part of his numerous body of admirers and disciples: indeed, as far back as 1802, John White, when publishing the second edition of his uncle's book, wrote a few lines of biographical record, which he presumes "will not be unacceptable to the reader." In later times Professor Bell, to whom a number of letters and family papers relating to Gilbert White were lent by some of the latter's family, wrote a brief memoir, which he prefixed to his valuable edition of the "Selborne." Mr. Bell must, however, be pronounced a very perfunctory biographer, who made a decidedly imperfect use of his materials. Recently a necessarily very brief sketch of the Naturalist's life has been contributed to the "Dictionary of National Biography," by Professor Newton, F.R.S.

The present publication has been prepared by Mr. Holt-White from materials which not only include all the documents seen by Mr. Bell, but in addition many recently discovered

A Reminiscence of Selborne in 1751.

Drawn in London by Gilbert White's Friend, Thomas Mulso.

letters and papers of White's; a Journal (printed in full) which was kept at Selborne in the summer of 1763 by one of the "Miss Batties," to whom the Naturalist addressed his well-known verses upon Selborne Hanger in the autumn of that year; and a complete and most interesting series of letters to the Selborne Naturalist during the period 1744-1790 (almost the whole of his adult life) from his friend and contemporary, the Rev. John Mulso, a brother of Mrs. Chapone, the authoress. These letters, which are freely quoted from, throw much new light on White's career, which they serve fully to illustrate. A pedigree of the Naturalist's family has been added. The illustrations comprise (*inter alia*) several portraits in photogravure from original pictures of Gilbert White's nearest relations, including his grandfather, the Vicar of Selborne, and three of his brothers, Thomas, F.R.S., Benjamin (who published the "Selborne"), and Henry White, Rector of Fyfield.

By the courtesy of author and publisher we are able to reproduce one of the illustrations.

The Country, Month by Month.—Messrs. Duckworth have in the press a new and cheaper edition in one volume, of this work, by J. A. Owen and G. S. Boulger.

The Last of the Buckhounds.—The "Royal Buckhounds" have "passed," and their disappearance will be unlamented except possibly by the editor of the *County Gentleman*, and a few people learning to ride who think that the experiences of seeing a tame deer pushed along a road, and of keeping on their horses, deserves to be called "sport." Most of these careful hunters will probably shrink from the more risky undertaking of pursuing the fox, which is to be substituted for the safe pastime of trotting after a domesticated deer, as a fox seldom has to be kicked and hustled along, and does not often end by impaling itself on railings, and there wriggling helplessly. It has a pestilent habit of leading its pursuers across the difficult country where hedges are high, where ditches are deep and broad, and where there are no gates. These are the things which will make men of a certain type sigh for the good old days! But we may be allowed to feel elated at this belated abolition of a form of "sport" which was no sport, which was cowardly and brutal, as well as costly and grotesque, which was called royal, though detested by the late and the present monarch, and against which we have protested continually for years.—*Morning Leader*.

Croham Hurst.—Now that the great fight for the preservation of this beautiful little bit of woodland is practically over, Mr. E. A. Martin, to whose untiring efforts this success is so largely due, has appropriately summarised the story of the struggle in the columns of a recent number of the *Croydon Advertiser*.

The United Devon Association.—Mr. W. J. Richards, of Riversdale, Torquay, writes :—

"I cordially agree with Mr. George A. Musgrave's opinion that many of the hotels in Devonshire need improved management. I have, on various occasions, at meetings and in the press, called attention to the subject. The public and the proprietors would equally benefit by a more enlightened management. In this particular, as in the education of the public on other matters, sympathisers with the objects of the Selborne Society might with advantage co-operate with the U.D.A. For instance, in preventing the disfigurement of beauty spots by thoughtless picnickers, and the destruction of wild flowers and ferns by the tramps employed by dealers in those gifts of Nature. Last autumn the Association, at considerable expense, engaged a mounted patrol to watch over the country frequented by offenders stretching from Drewsteignton to the Dart. The Chief Constable of Devon reports that much benefit was secured by this arrangement. I enclose a copy of a report on this experiment. The patrol distributed notices warning offenders ; and, if money is forthcoming, similar action will be taken this spring. I am confident that the Chairman, Lord Clifford, would readily agree that the Association's agent should distribute any of the Selborne Society's notices bearing on this matter. The U.D.A. desires to attract people to the county who have the taste to admire the scenery, objects of interest and other attractions Nature has so bountifully lavished on this garden of England. Especially the 'Book of Fair Devon' is intended to induce the right class to select the county for a residence. I notice in the *Western Morning News* of to-day (March 9), a notice calling attention to the value of the work the Selborne Society is doing, and asking that Devonians would join a branch in Devon. I certainly trust that this appeal will secure hearty response. In these days of travelling facilities the public should be warned that any damage to the gifts of Nature is a public injury that each citizen is interested in preventing. The U.D.A. is a young organisation and has much to learn, but its objects are essentially patriotic and not mercenary."

St. Francis D'Assisi League of Mercy.—We have received from Brother Antony, of Hagbourne, Didcot, the Report of this League, which he is carrying on. The balance sheet shows a deficit of £80.

Stray Cats.—Miss E. Lecky writes :—

"The article by Philælurus has opened the way for a few remarks, which I have often wished to make, upon the 'London Institution for Lost and Starving Cats,' 38, Ferdinand Street, Camden Town, N.W., in case it may not be known to all Selbornians. This is an excellent institution and deserves wide support, many thousands of poor suffering cats having been mercifully destroyed since its commencement five years ago,

while others are taken as boarders. Strays are fetched and destroyed free if necessary, but a small fee is charged for those whose owners can pay. Full information is forwarded on application. The Manageress is an anti-vivisectionist. Every town ought to be provided with such institutions, as being very merciful to the animals themselves and a highly sanitary measure to the inhabitants. The Institution is in need of funds. I have been greatly helped by this Home in the case of strays, and in that of an old pet cat who had ceased to enjoy life; and can recommend it to Philælurus and others, to whom it may not be known."

Nature-Teaching in Elementary Schools.—The Rev. A. F. Curtis, Vicar of White Notley, Essex, writes:—

"If any of your readers are Managers of Elementary Schools, may I suggest to them a plan I have adopted with success for interesting children in natural history and educating their powers of observation, namely: (1) the monthly issue of a number of copies of Nature Notes as reading books for the upper classes, which supplies much more varied and interesting matter than the usual reading books, which have to be read over and over again. (2) Providing notebooks in which they record each day (generally whilst the registers are being marked) any objects of interest they have seen during the previous twenty-four hours —birds, plants, fossils, or even observations on the weather. I have noticed a marked increase of intelligence in the children as a result of the above practice, and I have also been kept informed of many things which would otherwise have escaped my own observation. Amongst other things, I may add that a rat was seen carrying an egg in its *mouth*, not in the elaborate fashion described by one of your correspondents. I occasionally get curious local names. Has anyone, *e.g.*, met with the name '*Frank* Heron,' or is it a corruption of some other name wrongly pronounced or spelt?"

Natural History by Advertisement.—Mr. E. A. Martin writes:—"Messrs. Colman, of Norwich, are issuing four large natural history sheets, mounted on cards, to be hung on the walls of school rooms, institutes, &c. They are of course issued as a means of advertisement, but the advertisement of the mustard is so carefully veiled, and the sheets are likely to serve so useful a purpose, that I may perhaps refer to them in Nature Notes. The sheets illustrate the birds, eggs, flowers and butterflies and moths of Great Britain. They are well and judiciously coloured, and any Branch that deals with the instruction of children in natural history, would be well advised in applying for the series, the distribution of which no doubt Messrs. Colman are anxious to secure."

Fiction in Natural History.—Our esteemed French con-

temporary, *L'Ami des Bêtes* appears from the following paragraph to have followed the fashion in admitting fiction to its pages. It relates that :—

A man, followed by his dog, was going over a level crossing when an express train came down on him and cut him to pieces. Distraught with grief, the dog, having waited till his master's body was carried home, then disappeared. The next day a man working on the line saw the dog come to the same level crossing, and at the same time as his master had been killed yesterday, and lie down on the rail. Before the labourer could interfere, the express was down on the faithful creature, but the cow-catcher caught him, and hurled him, only slightly injured, into a ditch. With a dismal howl the dog ran to a neighbouring stream, threw himself in, and was drowned.

Correction.—The illustration in Mr. Wesley Page's article on Parrakeets in last month's number was inadvertently printed upside down, and should have been described as a "Log Nest."

SQUIRRELS.

THERE appears to be a custom for young men and boys to hunt squirrels each year in the New Forest, when they generally succeed in bringing down on their heads indignant and angry remonstrance for so doing. No doubt the boys enjoy the sport, or they would not indulge in it. If, however, they were to attempt to justify it by saying they had killed some creatures not altogether angelic in their habits, and that their numbers required thinning, would they be quite wrong?

To the squirrel England is well-nigh Utopian. The majority of his natural enemies are non-existent: he does much as he likes, and flourishes amazingly. His pretty, engaging ways make him a favourite: his defenders and admirers are many. But he is a scamp in spite of it all. His relatives have a bad name. He is too nearly allied to that detestable animal, the brown rat, to escape suspicion; and belongs to a race that with hardly an exception is omnivorous and cannibalistic. When, then, we enquire into his character our suspicions are confirmed. The damage committed by squirrels in plantations is well known.

In Ross-shire (a friend writes to say) miles of firs have been destroyed by their eating the points off the tops and branches. It was only last autumn that I heard a man up there talking about it, and he said the trees would never come to any good.

Squirrels are often caught in traps baited with fresh meat for cats or weasels, and those who have kept them in confinement may have discovered that a chicken bone off a plate does not come amiss to them.

That they are egg stealers and persecutors of many of our little birds there is no doubt. In a garden that I know of a squirrel appeared one spring, and almost all the eggs of the small birds about the place were sucked.

In Schlich's "Manual of Forestry," vol. iv., "Forest Protection," by W. R. Fisher, p. 103, are the following remarks :—

The damage done by squirrels is greater than is generally imagined. They eat fruit and seeds, cotyledons and buds, and bite off young shoots, remove bark, and destroy eggs and young birds. Their utility in destroying beetles, larvæ of saw-flies and other insects, does not compensate for the harm they do . . . . More harm, again, is done by the squirrel digging out seeds and cotyledons from the ground, and biting off cotyledons of the beech in seed beds and reproduction areas. It also uproots young oak plants to get at the remains of acorns . . . . Protective rules. Protection of the pine marten (*Mustela martes*), a great enemy of the squirrel. Shooting in spruce seed-years, and in nurseries.

A letter from a neighbouring observer says :

I once found a blackbird's nest in a tree : a squirrel was sitting on the edge of the nest, with its head down in the nest. A blackbird was excitedly threatening the squirrel as near as it dared. On climbing to the nest I found in it one fresh blackbird's egg with two small holes just made in it, also white of egg and fragments of egg shells. I once found fourteen nests of goldcrest in about an hour ; one contained eggs, the rest had the lining pulled over one side of each nest. I have since found several other goldcrests' nests in similar plight. I hope you will not be too hard on squirrels, even if you decide to lessen their numbers.

Having, I think, made out the squirrel's evil ways, I hope some reader of NATURE NOTES will take the other side and tell us of his good qualities.

EDMUND THOS. DAUBENY.

Market Weston, Thetford.

THE DOGS' SEPULCHRE.

SOME little time ago I read in *Le Temps* an account of what was called a Russian superstition regarding bats. It was said that these creatures took a special delight in attaching themselves to the hair of Russian peasant girls, forcing their way through the folds of the hair and holding on close to the head, so that the poor girls, in their fright, would tear out their hair in their efforts to rid themselves of the intruder.

This legend of the bat, which I had certainly heard before, though perhaps more curious than instructive, is no doubt founded on fact.

I remember very well when I was a boy of about ten years old, I made my first descent into "The Dogs' Sepulchre," which is a square hole formed by Nature in the limestone rock in Cleeve Woods in Somersetshire, about twenty feet deep and, say, four feet across. My brothers and I used to get down by means of a rope tied to a tree close by. When at the bottom I heard an incessant shrieking close behind me, and this continued after I had got up out of the pit. I soon found out the cause, which was, as I suspected, a bat, and my brother took it from the back of my shoulder, where it had hooked itself on

to my coat. We sat down to examine it and see its bright blinking eyes and sharp little teeth : we next extended its wings, taking a particular interest in this, as they form, when tied together with an heraldic silken cord, our family badge. The little creature, however, was not subjected to any ill-treatment with the string we had in our pockets, but gently handled and eventually lodged safely in some ivy, where he could resume his interrupted slumbers, to come out again with the appearance of the evening star.

Now if the person who had thus invaded the darkness sacred to bats and the bones of dogs shot by gamekeepers had been a girl with an abundance of hair twisted and curled up on her head or flowing down her shoulders, it is quite likely the bat would have attached himself to this ; and out in the broad daylight he would have probably tried to escape from it by getting in between the folds or locks of the hair, and having got there, and finding himself warm and comfortable, he would naturally wish to remain. Such a thing happening to a girl for the first time would be sufficiently frightening, however strong her nerves might be, and she might be pardoned for almost tearing her hair out in the endeavour to get rid of what she should know is perfectly harmless, and would know if natural history were properly taught in the schools.

As many Russian peasants live in caverns and holes in the earth, and dark cabins, I expect that the bat story has much more truth in it than one might at first suppose, but I rather doubt if all peasant women are easily frightened by bats ; here is what Figuier tells us in his "Mammalia" :—

"Dr. Franklin says that he has seen in several farms in England, bats which were perfectly tame. These little creatures lived in the same room with the farmer's family. If anyone, holding an insect between his lips, imitated the buzzing of a fly, they perched upon his shoulder, sought for the insect around his mouth, and even seized it from between his lips.

"In the East there are few inhabited houses in which bats do not reside. In summer many are seen hanging to the arches of the cellars in Bagdad, and living on good terms with the natives, who are in the habit of shutting themselves up in such places to avoid the intense heat of the climate. There they remain all day without being disturbed by the noise and activity of traffic."

The vampire bat of South America is by no means so harmless as the species we have been considering, its blood-sucking propensities proving in some cases fatal to man. Still the stories that have been told about it by travellers are on investigation found to be exaggerated.

GILES A. DAUBENY.

Tuckton, Christchurch, Hants.
February 3, 1900.

REVIEWS AND EXCHANGES.

North American Fauna, No. 16 ; *Results of a Biological Survey of Mount Shasta, California.* By C. Hart Merriam, Chief of Division of Biological Survey, U.S. Department of Agriculture. Washington, 1899.

Once more we are indebted to the United States Department of Agriculture for a most excellent piece of work, not only biological but geographical in the best sense of the word. This report, in less than 180 pages, illustrated by five beautiful photographic plates and forty-six figures in the text, is the result of the biological survey, during the summer of 1898, of a magnificent volcanic mountain, still glaciated, though far less so than in a former age, trenched with canyons and clothed up to its snow-line with pine forests. The report enumerates the chief perennial flowering plants, giving notes on their distribution, the birds—with excellent figures of seven species—and the mammals, which include new species of shrew, harvest-mouse and rabbit ; and fully describes the characteristics of the successive mountain zones. Speaking of forest fires, the author lays down the interesting "general rule that the destruction of forests, by admitting the sun and wind, lessens the moisture in the soil and increases the temperature, thus inviting animals and plants to come in from adjacent warmer areas. Deforestation of an area, therefore, tends to lower its zone position." The whole work seems to us almost perfection.

The Fauna of New South Wales. By T. A. Coghlan. Presented by the Agent-General for New South Wales. Pp. 15.

This is a carefully compiled sketch, mainly from an economic standpoint, of the vertebrates, mollusks and crustaceans of the colony.

Society for the Protection of Birds : Tenth Annual Report, January to December, 1900, pp. 54.

This is an interesting account of satisfactory progress, from which it appears that there are now only three counties in England without Protection Orders.

The American Society for the Prevention of Cruelty to Animals : Thirty-fifth Annual Report for 1900. New York, 1901, pp. 158.

This also is a report of satisfactory progress, though in a very different direction from that last-mentioned. Perhaps the publication of details of prosecutions may have a deterrent effect, but we protest that we can imagine no good purpose served by pictures of instruments of torture or of emaciated and wounded horses, the victims of those prosecuted by the Society.

Thirty-first Annual Report of the Wellington College Natural Science Society, 1900, pp. 54.

This report of the year's work of one of the Public School Societies recently affiliated to the Selborne Society, is a good example of what such a report should be. If a somewhat liberal interpretation of the term " Natural Science " is necessary to include the themes of some of the lectures of which abstracts are included, there are full meteorological tables, and the revival of the Field Club section seems to have healthily stimulated the botanists, entomologists, ornithologists and geologists.

Nottingham Naturalists' Society : Forty-eighth Annual Report and Transactions for 1899-1900, pp. 25.

Besides business details this report contains two papers both dealing with the entomology of the county.

Received :—*The Victorian Naturalist* for January, and *Knowledge*, *Science Gossip*, *The Naturalist*, *The Naturalists' Journal*, *The Irish Naturalist Humanity*, *Our Animal Friends*, *The Animal World*, *The Animals' Friend* and *The Agricultural Economist* for March.

NATURAL HISTORY NOTES AND QUERIES.

The Wild Goat.—Ought the wild goat to be counted among indigenous British animals? The question has often occurred to me, when I have seen wild goats, or at any rate goats in a state of complete freedom, on some of the more rocky and unfrequented mountains of North Wales; but I have never been able to obtain any information from books as to the origin of these animals—whether they represent an indigenous stock, or are descended from escaped goats of the domestic kind. In a recent number of *Country Life* (March 2, 1901), there appeared a very interesting article on "Wild Goats in Wales," in which it is stated that there are several Welsh herds of genuine wild goats, one, for example, in Pembrokeshire, another on the Rhinog range in Merioneth, another on Moelwyn, &c., and that the existence of this native breed has been overlooked by naturalists. I have myself seen magnificent specimens of wild goats—as wild as chamois, and as difficult to approach— on the Rhinog Fawr, and also in Carnarvonshire; but the tourists' rage for rock-climbing has now driven them from the cliffs of Snowdon and the more famous Welsh mountains. Goats are also found in the wilds of Skye, Arran, and other rocky parts of Scotland, and occasionally in the Lake District. Perhaps some of the readers of NATURE NOTES may be able to throw some light on the interesting question that these facts suggest.

S.

Dogs.—A collie belonging to a house in which I have lately been staying has had a litter of pups, one of which died. This she buried. I do not remember having come across a similar case of maternal instinct in dogs.

Market Weston, Thetford. EDMUND THOMAS DAUBENY.

Albinism.—I was shown to-day a specimen of a white mole which was caught a day or two ago at Ansty, near Coventry. Is this a rare occurrence? I have seen albinism in birds before, but never in a mole.

Coventry, February 27, 1901. S. B.

[Not very uncommon.—ED. *N. N.*]

How Rats Carry Eggs.—On reading the many opinions and suggestions as to the manner in which rats carry eggs, I resorted to an expedient which has produced the following results. I had a dozen egg-shaped wooden balls made of very soft limewood. This was covered with a light coat of white paint. Three of these wooden eggs were—when quite dry and without smell—laid in a nest. Two disappeared the first night and were replaced by three others. Two of these were missing the next day. Then for a period of a week none went. Afterwards more were taken, until eight of the twelve had gone. Of these missing eggs, one was found in the poultry-yard, and on examination clearly displayed the marks of a very sharp, penetrating awl at the thinner end of the dummy egg, both under and above, as I will call it. We made very careful searches to find where the other seven had been taken to, but were unsuccessful, until a loft, where hay had been stowed away, was cleared, and there we found five of the other seven eggs. Every one of them was marked—say *v. gr.* "tooth marked"—some with one above and one underneath, and some with several (eight to twelve) marks. One even bore the signs of a gnawing effort.

Did a rat carry them in its mouth, or were they removed by a polecat? Both have been seen in the yard. A real egg is rough, and a very small space would be enough for the jaw's grip to hold, when the tooth is sharp and the grip firm and steady. The dummies found in the loft were much deeper marked than the one picked up in the yard. I leave this statement without a conclusion.

Poucques, Belgium. H. K. E.
January, 1901.

As to how rats carry eggs, I would like to say what I saw. We kept a road-side inn a great number of years, a watercourse running close by. We were undermined with rats. One night going into the cellar, which was on a level with the smoke-room, I saw three rats in an egg-basket which was on a high shelf, some halters hanging by the shelf. I saw one come down the halters with an egg under the chin, and go into its hole under the barrel. On making inquiries from the keepers I was told they usually carry them under the chin.

ROADSIDE (in a contemporary).

Moles and Weasels.—A few days ago I took up a mole-trap from a run in a bank, in which I found a lively weasel, it having been caught round the neck without strangling it. I eased the grip of the trap without letting it go, and thought it might interest people in the village, and also test the knowledge of people in natural history. I met several people on the road, and, of course, a struggling weasel in that position is a novel, if rather a cruel, sight. Several people could not even guess its identity. I tried one who called it a rat, the next called it a stoat, the next a squirrel, and the fourth a weasel. I loosed it into a wire rat-trap and have provided it a bed of leaves and hay, and it feeds on dead moles taken from traps, so that it is probable weasels kill and eat moles in runs out of sight.

Astwood Bank, Redditch. J. HIAM.

Birds Singing when Abroad.—In reply to Mr. Daubeny's query, I do not think that, as a rule at all events, birds sing in their winter quarters, when those quarters are not regularly inhabited in the breeding season by any individuals of the same species. To give only one or two instances (of which I could give several), I saw robins in the oases near the shores of the Gulf of Gabes in January and February, but they were not singing, although the weather was warm and, of course, at that date robins would be singing in England. The *Phylloscopi* one sees on the shores of the Mediterranean in mid-winter are silent save for their call-notes and alarm-notes—at least, this was my experience. If birds habitually sang when they were in their winter quarters, we should probably hear the fieldfares and redwings singing here in winter as the song-thrushes do. Redwings sometimes sing a kind of song in the early spring before their departure from these shores, but this is not the full song, which one hears in Norway, for instance.

Bloxham, Oxon. O. V. APLIN, F.L.S.

February 14, 1901.

Nightjar sitting Crosswise.—Mr. Westell asks for readers' experiences of the nightjar perching crosswise. I can only remember seeing the nightjar perch thus on one occasion. The bird, a female, perched crosswise on a rail in a fence. She settled with her tail towards me, not more than two or three yards from where I was standing. In a few seconds she turned completely round and faced me, still sitting crosswise. I ought to add that my experience of the nightjar in life has not been very large.

Bloxham, Oxon. O. V. APLIN.

The Hoopoe in England.—May I ask Mr. W. T. Collier what his authority is for the statement he makes on p. 37 that hoopoes were quite common in this country a hundred years ago? I ask simply for information's sake. Pennant (1776) says, "It visits these islands frequently [the same may be said at the present day.—O. V. A.] but not at stated seasons, neither does it breed with us." Plot, a hundred years earlier, certainly states that it bred in this country, but he adds that it was rarely seen, and he only knew of two occurrences of this species in Oxfordshire. I can find no evidence in the older writers which I have consulted (viz., Willughby, Ray, Charleton, &c.), that the hoopoe was ever a quite common bird in this country.

Bloxham, Oxon. O. V. APLIN.

Sea Gulls.—Those whose business in the City takes them daily over London Bridge cannot but have been struck lately by the large number of gulls which visit London during the winter season, and many must have derived pleasure from the sight. Ten or twelve years ago a gull in the city was quite an unusual sight, but for the last few winters they have visited us in increasing numbers, and may now be seen in hundreds flying within a few feet of those who feed them. The spectacle of these wild inhabitants of our coasts showing such confidence in man suggests the thought of how many friends amongst birds and beasts we might make, if we would only cease to molest them.

Wallington, Surrey. C. H. MORDAUNT.

The Early Life of the Young Cuckoo.—The early stages in the life history of the young cuckoo are, as is well known, very interesting, and I hope the following authentic particulars may be found of interest and service. The egg was found in a hedge-sparrow's nest at Potton End, Hemel Hempstead, Herts.

on May 17, 1900. The nest was placed at the bottom of a large disused gravel-pit, overgrown with furze, broom and brambles, and was about eighteen inches from the ground. It contained three eggs of the hedge-sparrow and one cuckoo's. On May 29 the cuckoo and two of the foster parent's eggs were found to be hatched, and the young cuckoo was observed to be asserting himself conspicuously even at such an early age. Only two days had elapsed (May 31) before the unruly young rascal started, and finished, the shovelling-out process. One egg and one young hedge-sparrow had just been toppled out of the nest by the cuckoo with the aid of its hollow back, which is so well suited for this purpose. The remaining young one could not be found high nor low, and one wonders whether the voracious young culprit devoured it, or did the foster parents carry it away from the nest? The next was visited on June 11, when the cuckoo would be about fourteen days old. He had made great progress since the last day of May, and the small nest of the bird under whose care he had been placed was quite insufficient to hold him comfortably. Three days after our last visit (June 14) we found the cuckoo out of the nest and screeching, when he would be about seventeen days old. We thus arrive at the following interesting information. May 17: Nest found containing cuckoo's egg and three hedge-sparrow's eggs. May 29: Cuckoo's and two of the hedge-sparrow's eggs hatched. May 31: Cuckoo ejected the other occupants of nest. One young hedge-sparrow missing altogether. June 11: Cuckoo the sole occupant of nest, and fully fledged. June 14: Cuckoo out of the nest and screeching.

It may be interesting for me to state that I have a series of excellent photographs illustrating the various stages described above, which will be produced in a forthcoming natural history work from my pen.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
March 12, 1901.

Cuckoos.—A relation of mine hearing a fluttering noise in a hollow tree last autumn, found it was caused by the attempts of a young cuckoo to escape from the nest in which it was horn by a hole in the tree too small for its body. The hole was enlarged and the bird liberated. This shows that cuckoos sometimes employ other means for introducing their eggs into the nests of little birds, besides the ordinary process of laying.

EDMUND THOMAS DAUBENY.

Birds "Dipping."—This afternoon I saw birds "dipping" after the manner of swallows in a pool. The species I noticed doing this were chiff-chaffs, a cock-chaffinch and pied and grey wagtails. I do not think they could have done it for the purpose of drinking, as, the pool having mud banks in it, this could have been done in the ordinary method. I fancy that there must have been food of some kind, probably insects, floating on the surface of the water, but I was unable to ascertain what this food was.

Penzance, February 17, 1901. ARTHUR W. HEXT HARVEY.

Rooks.—My attention has been particularly attracted lately by some rooks which are forming a rookery in some young elm trees. Three years ago there were no nests there, but the next year a solitary nest was formed by a pair of rooks, and last year these pioneers of rook civilisation were joined by another pair, which built their nest and reared their young in an adjoining tree. This year no fewer than five new nests are being built. For some days the new birds—which, by the way, are young ones—have been sitting around the other nests evidently intently watching the repairing operations of their elders in order to pick up some "tips" on nest-building. Once I saw two young birds go into one of the nests of the old birds, who, however, made no remonstrance. Personally I think they did this to examine the structure of the nest, and learn how to make one themselves. Anyway on the next day a fresh nest had been started within a few feet of the old one, and though, of course, I could not be positive as to the identity of the birds, I think they are the same. It is a rather curious thing that five new nests should have been commenced this season, as this would exactly correspond with the number of the birds hatched in the last and previous years' nests, as in my experience the rook's clutch usually consists of five eggs. Since writing the above a heavy gale has blown away the oldest nest in this new rookery.

Penzance, March 1, 1901. ARTHUR W. HEXT HARVEY.

Rooks and Sparrows. — Has the reader ever noticed the predatory character of the rook? Just recently I observed a couple of these birds watching carefully a crowd of noisy chirruping house sparrows, who were quarrelling over a crust of bread one of their number had carried from a neighbouring backyard. The two sagacious rooks kept hovering, hawk-like, in the air, and then settled on a low hedge hard by the smaller birds. Presently one of the sparrows made off from the rest with the coveted prize, and immediately one of the rooks pounced down and snatched away the tit-bit, devouring it with evident self-satisfaction. I could not understand for some little time what the rooks were hovering about after, oblivious of my presence, and the cool ending of this little episode was certainly very striking. I observed the same proceeding the next day at precisely the same spot.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
February 15, 1901.

Robins.—There is no doubt that these birds are very pugnacious, and that they are born fighters. The legendary cock sparrow who shot cock robin with the aid of his bow and arrow would have stood a poor chance of success, I think, in a fair stand-up fight, but that by the way. I get about the country-side a good deal, and am continually amongst the birds, observing them in every detail. I have yet to see a robin *v.* robin fight, and consider that it is an unfounded idea that the young birds fight the old ones during the autumn. Of course we do not see anything like every side of a bird's life—indeed of wild life—and wild birds injured or sickly frequently resort to the thickest parts of coppices, woods and the like, where they die unnoticed and are speedily devoured by carrion eaters, beetles, and other living creatures, which so soon take advantage of a dead bird and pick it as clean as a new pin. One often wonders how do wild birds die?

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
February 15, 1901.

The Lark's Courtship.—With the thermometer at several degrees below zero, and a biting north wind, is it not curious that the skylark still delights to soar and sing? If we enquire into the matter, however, and watch the birds carefully in their various ways and mannerisms, we find that in February these song-flights in all weathers—rain, hail, or snow, storm or sunshine—are undertaken to attract and court partners for the coming summertide, and the strains uttered, therefore, become love's old sweet song. A female lark is upon the ground, not knowing which way to turn as she has so many admirers and so many sweethearts; first one male bird and then another chases her and struts proudly before the object of his choice: then one after another these rise in the air—the jealous husbands—and endeavour to outvie each other in their sweet cadences, for their plumage is not resplendent and they must rely on their song. It is all very wonderful, especially so when such an one as the writer observes the birds daily, and notes and notices their vastly interesting ways and little idiosyncrasies.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
February 15, 1901.

Chiff-Chaff.—Perhaps it may be new to some of the readers of NATURE NOTES to hear that the chiff-chaff is a resident in this part of Cornwall. I do not mean, of course, that none of the species migrates, but a fair proportion remains here during the winter. On Sunday last (February 10) I had the pleasure of seeing some half a dozen chiff-chaffs quite busy catching insects of some description on a pool overhung by young sycamores. This pool is a favourite haunt of several kinds of birds, such as wagtails (pied and grey principally), chiff-chaffs, willow wrens and occasional water rails. The willow wren can usually be found here in parties of perhaps a score or more when they first arrive, and again when they congregate prior to their autumnal migration southwards. Some few years ago I was the witness of a tragedy in bird life at this pool. It was winter time, and hard weather, and the starlings finding the more open country frost-bound came down to the edges of the pool (which, being running water, remained unfrozen), and fancying themselves transformed by necessity into snipe, probed in the mud for worms. Suddenly a very large rat, probably also pressed by hunger, rushed out of a hole in the bank,

which at this part overhangs the water, and sprang on the back of a starling and seized it by the nape of the neck. There was a shrill scream from the starling, and before I could fully realise what was happening all was over and the rat had dragged the starling into his hole. The other starlings flew up into the trees and made a great fuss, but it was too late for them to render their unfortunate comrade any assistance. It is in summer time, however, that we see most bird life at the pool, and on a summer's evening it is a pretty sight to watch the swallows hawking over the pool and dashing between the trees in a most bewildering manner. Later on in the evening many kinds of birds come to the pool from the surrounding orchards, to drink and bathe before retiring for the night. At this time of the year (the summer) the pool is very beautiful, being covered on one side by blue and white hydrangeas. The amount of bird life to be seen at this kind of pool by a careful and quiet observer is vastly larger than would be credited by the ordinary casual observer who takes no trouble to conceal himself or keep quiet.

Penzance, February 14, 1901. ARTHUR W. HEXT HARVEY.

White Blackbird.—On Sunday evening (last night) at 5.45, just near the bottom of the West Hill I saw a white blackbird. Some blackbirds were making a great commotion in a bush at the side of the road, and then I saw a white bird with two or three blackbirds fly out of the bush. At first I thought it must be some bird that had escaped from a cage being mobbed by the others, but presently I saw all three birds settle in a holly bush. I crept quietly up to it and stood for a minute or more with the white bird not a yard from me—so that I was able to see and hear it uttering the distinct blackbird scream. Also the familiar cocking up of the tail every time it moved, together with the flight when I startled it, left no room for doubt as to the species. The bird was not entirely white, as I noticed the tips of the wings were dark, also one or two of the tail feathers.

40, *Southwood Lane, Highgate.* CHARLES T. PARSONS.
February 25, 1901.

An Intelligent Starling.—Early one spring morning, not long ago, I was watching the flowers opening, the birds singing and other signs of spring from my bedroom window, when down flew a starling from the roof over my head, and alighted on the wall at the end of the garden. It immediately fluffed out all its back, head and breast feathers, and shook itself till quite a cloud of dust came out from them. I watched it fly back and repeat this curious performance so many times that at length I got quite tired of observing its manœuvres, for at the end of half an hour it was as busy as ever. The reason of its energy was obvious; it had seized on a nesting hole under the eaves, but had found it so full of dust of crumbled mortar and other building materials, that with a view of cleansing it, it must have dusted it out with its erected feathers by rubbing itself round and round its new home; then, adjusting them smooth, flown out and got rid of the dust in the way I have described. Do these birds usually do their "spring cleaning" in this way, can any reader say?

Haw Bush. Brettell Lane, Stourbridge. F. GIBBONS.
March 8, 1901.

Green Woodpecker.—I do not know whether you will consider the following contribution worth inserting in NATURE NOTES. In common, I suppose, with most Selbornians, I make a regular practice of feeding wild birds every snowy or frosty morning during the winter. The attendance at this meal became large during last month's (February) long-continued frost, and one morning, to my surprise and joy, on walking a little way off, and looking back, I saw a green woodpecker descend with his vacillating flight to the midst of the crowd of commoner birds, and have a few pecks at the food, which consisted of scraps of bacon fat and a few crumbs soaked in milk. The green woodpecker is such a shy bird that the fact may be worth recording.

Sotterley, Wangford, Suffolk. M. E. B.

Chough.—I am indebted to Mr. Collier and Mr. Westell for their notes hereon in last February's issue. I am greatly pleased to learn that the chough is so abundant in Ireland, and I hope it will continue to increase. At one time it was a common bird all along the coast of Cornwall, but now it only survives in one or

two favoured localities. I have been recently informed that this bird has been seen on the cliffs to the west of Penzance, hut I very much doubt the accuracy of the statement, as the casual observer gets hopelessly mixed in the members of the crow family. I shall endeavour to ascertain, however, how far there is any truth in the report. Truly the times have greatly altered for the worse since Carew wrote, whilst speaking of birds that live by the sea, "Amongst which, jackdaws (the second slander of our country) shall pass for company as frequenting their haunt though not their diet. I mean not the common daw, but one peculiar to Cornwall and therethrough termed a Cornish chough." Nowadays the only "slander of our country" in connection with the chough lies in the fact of the persecution which he has received. Also, I fear, he is not long to be "peculiar to Cornwall," save most probably by his absence.

Fenzance, February 15, 1901. ARTHUR W. HEXT HARVEY.

Natives and Foreigners.—The English goldfinch is now becoming well established in our island-colony, and flocks of these delightful little birds may be seen in the neighbourhood of Launceston, especially at the First Basin, a lake-like expansion of the swift Esk River, with plenty of scrub growing around its shores: here they love to flit from tree to tree, their brilliant colours glowing in the sunlight. Even down this coast they are rapidly pushing their way, and a flock was seen a few months ago on the Sisters' Hills, away to the westward, much to the wonderment of some of the young natives, who had never seen these birds before. Now comes a strange fact: our large Pallid cuckoo (*C. pallidus*) is beginning to adopt the goldfinch as a foster-parent to its young. On the 4th of last month a nest was found with two eggs of the finch and one of the large cuckoo. *C. pallidus* is in the habit of laying in open nests, in this differing from our other common cuckoos, the fantailed and the bronze, which nearly always choose domed nests for the insertion of their eggs; but the usual foster-parents of the Pallid species are the honeyeaters, some of whose eggs are not unlike its own. The difference, however, between the large flesh-tinted egg of the cuckoo and the small greenish ones of the finch, is very striking, and shows marked opposition to the theory that the intruded egg must not be alarmingly different from those of the intended foster-parent. It will be interesting to note in future summers whether this relation between native and foreigner becomes well-established.

Table Cape, Tasmania. H. STUART DOVE.
December 16, 1900.

Adders Swallowing Young.—Mr. Horace Tuppen, late of Ripe, near Lewes, Sussex, a sportsman-naturalist of the best type, has often described to me an observation of his upon a male and female adder and sixteen young ones. The occurrence took place on his own farm near Lewes some years ago, and those who know Mr. Tuppen (he was an intimate friend of Mr. Booth, whose Museum in the Dyke Road at Brighton is so well known and appreciated) will readily believe every word he utters.

Shortly stated, Mr. Tuppen shot the male adder, and no sooner had he done so than he actually witnessed the female receiving the young ones into her mouth. He shot her, and the young ones immediately came out of the female's mouth, my friend killing them one by one until the whole sixteen were disposed of! Mr. Tuppen narrated this incident to Dr. Stradling at one of that great authority's lectures, but I forget now Dr. Stradling's observations thereon. Lastly, Mr. Tuppen assures me that the snake-killer in the New Forest told him that he had witnessed adders swallowing their young on many occasions.

Mr. Joseph Hammond, of Sherbourne, Cocking, near Midhurst, writes on this subject as follows: "One summer evening, when I was on the side of the hills shooting young rabbits, I saw a large adder by the stump of an old tree. When it caught sight of me it raised its head, making a hissing noise, then opened its mouth, and immediately seven young ones, about six inches in length, crawled from under the grass, and one by one sprang into the mother's mouth. Then it began to crawl away. I put up my gun and shot it; then stamped my foot on the body of the old dead mother to kill the seven young ones. This you may accept for being perfectly true."

Mr. James Ede, Bailiff to Mr. G. A. Trist, of Prestwood, Ifield, Crawley,

Sussex, also writes: "Some years ago I killed two large adders and laid them on the grass close to the house. To my surprise, when I saw them the next morning, there were six young ones all dead lying in front and close to the adder's mouth, the last one only partly out. I had several people to look at them. The young ones were about six inches long: the large ones just over two feet."

The following extract from the Rev. Gilbert White's "Natural History of Selborne," Letter xvii., bears on this subject: "Several intelligent folks assure me that they have seen the viper open her mouth and admit her helpless young down her throat on sudden surprises, just as the opossum does her brood into the pouch under her belly, upon the like emergencies; and yet the London viper-catchers insist on it, to Mr. Barrington, that no such thing ever happens."

Perhaps some Selbornians can record authentic instances of adders swallowing their young, or favour us with their opinions thereon.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
March 10, 1901.

The Amazing Toad.—The toad that was lately found in a lump of coal, is but one other instance of the way in which the queer, uncanny-looking little creature can live, seemingly, without air, food, drink—any, in fact, of the necessaries of animal or even vegetable life, for an untold length of time. It can also make its home anywhere. Other creatures, whether inhabitants of earth, air, or water, have their own special climatic conditions of life. Not so the toad, for it has given us plenty of evidence to let us know that it can live as long, probably much longer, and thrive as well in a lump of coal, a block of granite, or even a slab of marble, as under an old rain-water butt in a damp back garden.

The very appearance of the toad suggests the "hole" which is popularly associated with its name; but to the beholder's thinking, the cavity should mean mud, slush, and slime, anything cold, clammy and slippery, like the weird, lonesome little being itself. Of all living things it looks the least capricious, yet none—as facts show—have such amazing whims.

It was about three-and-thirty years ago a toad was found embedded in a solid block of rock, twenty-five feet below ground, where it is supposed it must have existed for 6,000 years! The news of its discovery created much sensation at the time, and vast numbers of people went to see it at the Hartlepool Museum, where it had been lodged in an aquarium. It was not only alive but very lively (for a toad) despite the fact that it found some trouble over its first attempts at breathing. It had scarcely, however, seen three months above the surface of the earth when it died, the victim, it is supposed, of some prank perpetrated by over curiosity on the part of one of a party of "trippers" from Newcastle.

A running rival to this "Toad in Hole" story, is that told of the finding of the queer little hermit in a marble mantelpiece at Chillingham Castle, the Northumbrian home of the Earls of Tankerville. Moreover, it was right in the middle of a great slab of the marble, not in any chink or join, and large, alive, and apparently thriving to boot. The mystery of how it got there can only be explained or rather *supposed*—in one way. *Very* many years ago that block of hard marble was soft, pliant clay in its quarry deep down under the earth. Thither the small recluse groped to make itself a home, and there it stayed, willy-nilly, for years that are almost past computing. This toad story is vouched for by Wallis and Hutchinson, as quoted in Gough's Camden of 1789.

Toads have been found in the centre of the trunks of large trees by woodmen engaged in the task of splitting them open. In the diary of Abraham de la Pryme, which was in the keeping of the Surtees Society, mention is made of a toad found in this way, which the old antiquarian witnessed himself. He further adds, that there was no discoverable means by which the toad could have got into the tree. This happened in Yorkshire, in 1697. Of the three "Toad Holes" mentioned, the wooden sounds, for a toad, more homelike than the stone, coal, or marble one. These, however, are not by any means the only tenements of which it takes its rentless lease for any number of years. In sandstone and in iron-ore it will exist, although huried alive, while from America—the land of big-happenings—comes a tale of a toad so ferocious at being found out, that he scarcely let the finder escape with his life. This is, however, capped by what

sounds more like a legend than a story, of an untombed frog, in whose body was discovered an ancient Aztec coin.

So—taking all things—the twentieth century included—into consideration, the toad's ancient repute for the most opposing qualities of good and evil should cause no wonder. It has its uses, for which we are its debtors, the ungainly, misunderstood little animal of Shakespeare's time that points these lines of matchless verse : —

"Sweet are the uses of adversity,
Which, like the toad, ugly and venomous,
Wears yet a precious jewel in its head."

C. S. H.

Toad.—Is it possible for a toad to live 100,000 years without food and wit very little air? There is a specimen on view here (Rugby) which jumped out of a lump of coal which was being broken up on a fire. I saw it myself yesterday (February 23), a week after it made its appearance. It looks very ordinary, though rather smaller and flatter than the common species. It has a mouth which it either will not or cannot open. It is kept sealed up in a glass bottle so as to give it, as much as possible, an imitation of the position in which it was found. It seems in rather a drowsy condition. I have heard of toads being found in marble and chalk, but not in coal. How could it have become embedded so deep in the coal, since at that depth it is reckoned to be about 100,000 years old?

A Rugby Selbornian.

[Our correspondents altogether under-estimate the age of these toads in holes. If they were, as supposed, buried at the time of the formation of the coal or stone in which they are found, it is not a question of a paltry 100,000 years, but one of millions. Judging from newspapers and magazines for many years back, such "discoveries" are by no means uncommon. Without wishing to say that all are cases of wilful imposture as a source of profit from a raree show, we must say that we have had evidence that the manufacture of "Carboniferous" toads is a regular industry in some places. Speaking seriously, the toad is a highly organised and geologically modern species, no member of the group being known earlier than Tertiary times ; it hibernates in any hole it can find ; it may fall down a well ; and lastly, few of the recorded cases bear any proof of careful or scientific observation at the time. By the bye, clay, or hydrous silicate of alumina, is not very likely to form marble, or crystalline carbonate of lime.—*Ed. N.N.*]

Migration of British Insects.—The migratory instinct is so marvellous and shrouded in mystery as to give rise to endless theories and speculation. The senses and actions of the lower creatures are in many respects foreign to and beyond our own experience. We are unable to understand how they display intelligence of a kind in which cultivated human beings are deficient. We cannot imagine how insignificant creatures, made of flesh and blood, and, like us, accustomed to physical exertion under ordinary circumstances, are also capable of it in the highest degree under conditions when all our own powers at once desert and fail us. We often cannot tell why migration takes place at all ; or why fatal journeys are in some cases persisted in from generation to generation, that are of no apparent good to the race whence they came. These are some of the puzzles that the migrations of animals suggest to us.

Necessity of food and climate, and also the sexual instinct, are given as reasons for these migratory movements ; and an "inherited habit" is said to be a potent factor in influencing them all. There are, however, cases of migration which cannot possibly be said to spring from any transmitted or inherited habit. This is particularly the case with some insects.

At regular times in the year certain kinds of our common British Lepidoptera, and Libellulidæ, or Dragon Flies, are to be seen journeying over Heligoland, the most favourable spot in the world for observations of this kind, in countless clouds ; some of which are known to arrive on the east coast of England. Whence they start, and why they go is as yet unknown. Unlike birds which perform two annual journeys, one to their summer, the other to their winter abode, these insects make but one. Their journeys across Heligoland are always in

the same direction, from east to west. Some few perhaps propagate their species on their arrival here, but as they never live to see their children, and none return to the home whence they came, the migratory habit or instinct cannot be transmitted. In most instances males alone are the migrants. The vast clouds of the common Gamma Moth (*Pluxia gamma*) that perform this journey over the sea, are believed to consist of males only. And in the case of *Hibernia defoliaria* and *Hibernia aurantiaria*, which also migrate in great numbers, there can be no doubt about the sex, for the females are wingless.

To this list may be added the "Black Archer" (*Psilura monacha*) Cabbage Butterflies, and some other British Lepidoptera. It is also interesting to know that entomologists need never quite despair of capturing the scarce Swallow-tail Butterfly (*Papilio podalirius*) on British soil. This splendid insect nowadays is grudgingly bestowed a place on the list of British Butterflies from not having occurred for sixty or seventy years. It has, however, been taken occasionally in Heligoland, and as it could not possibly be indigenous to so small and unfavourable a spot, it must have migrated there from the neighbouring continent, where it not infrequently occurs. Let us hope that some unusually favourable season may induce it to prolong its flight to the English coast.

Why such frail creatures as insects should set out on a long and perilous journey to an unknown destination, whence neither they nor their offspring ever return, is an unsolved mystery, and completely breaks down the theory that migration is due to the inherited instinct or wisdom of the race. If the insects I have mentioned inherit any instinct it must be the reverse of migratory, for those that remain in their native land would transmit to posterity a tendency to stay at home.

Market Weston, Thetford.
February 7, 1901.

EDMUND THOS. DAUBENY.

SELBORNE SOCIETY NOTICES.

AT the Council Meeting held on March 19, Mrs. Percy Myles tendered her resignation as Librarian, owing chiefly to the work entailed as Hon. Sec. of the Field Club, &c. The Council accepted the resignation with regret and thanked Mrs. Myles for her past services. Mr. A. E. Malaher was appointed Honorary Librarian, and any additions to the Library will be thankfully received by him.

The following new members have joined:—Miss M. Harris Jones, Bournemouth; Miss Alma E. Marsh, Bromley, Kent; Claude Leatham, Esq., Wentbridge, Pontefract; Miss E. Grace Smith, Petersfield; Charles Bethell, Esq., Cheam.

The Council beg to acknowledge with thanks the receipt of the following donation:—Frank Rollason, Esq., 15s.; and the following subscriptions over 5s.:—Fred. Crowley, Esq., £1 1s.; Comtesse Anna Jenison, 10s.; R. M. B. Otter-Barry, Esq., 10s.; Miss C. Alston, £1 1s.; J. H. Masters, Esq., 10s.; Frank J. Brewer, Esq., 7s. 6d.; Mrs. R. F. Sturge, 7s. 6d.; Mrs. Farquharson of Haughton, F.R.M.S., 10s.

They have also to acknowledge with thanks the gift of an original letter by Gilbert White, from Sir Samuel Wilks, Bart., late President of the Royal College of Physicians.

Council Meetings.—The next meetings of the Council will be held at 20, Hanover Square, W., on Tuesdays, April 2nd and 16th, and May 7th at 5.30 p.m.

Annual Meeting.—As previously announced, the Annual Meeting and Conversazione will be held on Thursday, May 16, from 8 to 11, at the Society's Rooms, 20, Hanover Square, W., the President, the Right Hon. Lord Avebury, D.C.L., F.R.S., &c., in the Chair.

The Council will be glad to have the loan of suitable exhibits for the occasion, which will be under the direction of the following gentlemen:—Botany, Mr. L.

E. Taylor; Geology, Mr. Ed. A. Martin, F.G.S.; Microscopes, Mr. A. Holte Macpherson, M.A., F.Z.S.; Photographs and other pictures, Mr. A. E. Malaher; Zoology, Mr. Basil W. Martin, F.Z.S.

Members and friends willing to assist in this matter are requested to address the director of the department in which they wish to exhibit, care of Mr. R. Marshman Wattson (Secretary to the Conversazione Committee), Dalmeny House, Monument Street, E.C. Tickets will be ready for issue on April 15, and Branch Secretaries are requested to send their applications for members of their branch by that date.

Members requiring tickets should apply to the local Hon. Sec., or in the case of members unattached to branches, to the Secretary, Selborne Society, 20, Hanover Square, W. A stamped and addressed envelope must accompany each application.

The Council wish to draw the attention of members to the undermentioned Leaflets, the circulation of which is desirable.

The cruelty of Wearing "Ospreys"—R. B. Litchfield.

Feathered Women—W. H. Hudson.

A Plea for the British Butterfly—W. F. Kirby.

The Secretary will be pleased to forward them, post paid, on the receipt of 9d. per 100 copies.

Selborne Society Badges.—The attention of Members is called to the recognised badge of the Society. They are tastefully designed in pale and dark blue and silver, the outlines being as shown in the accompanying illustration.

They are especially useful as a means of identification between Selbornians at branch meetings, or at country Field Club Rambles.

Now that the season is drawing near for outdoor gatherings it is intended to make a further issue in the two forms mentioned below, providing there are sufficient applications. Members desiring either form should write at once to the Secretary.

If re-issued the prices will be—Brooch, 3s; Pin, 1s. 6d.

NEWS FROM THE BRANCHES.

Clapton (Lower Lea Valley).—The meeting of this Branch, held on Saturday, March 16, being the last of Session 1900-1901, was preceded by the Annual General Meeting, at which a satisfactory Balance Sheet and Annual Report were adopted, and officers duly elected for the ensuing session.

A selection of lantern slides of views in the county of Dorset was then exhibited by Mr. J. Wheeler, who called attention to the principal interest, whether archæological or picturesque, of each photograph.

Selborne Saturday Afternoons.

On the afternoon of Saturday, February 23, 1901, Mr. L. Fletcher, Keeper of the Mineralogical Department of the Natural History Museum, kindly conducted the Society over his special department, and gave a demonstration on the Precious Stones.

On the afternoon of Saturday, March 9, 1901, a party, numbering thirty-seven, assembled at the Temple Church, and under the guidance of Mr. Frederick Downing, F.T.S., spent two most enjoyable hours in inspecting the Temple and its surroundings. The ancient Church was of course the principal centre of attraction, and this was thoroughly explored. The grand fluted columns of polished Purbeck shell-marble were greatly admired, as well as the monuments which now fill the upper floor around the ancient circular church of the Knights Templars. The libraries and dining-halls of the Inner Temple and Middle Temple, respectively, were visited. In addition, the grounds were visited, and the conductor's dissertation on the land reclaimed from Father Thames when the Embankment was formed, and on the famous tree under which the Red and White Roses were plucked before the Wars of the Roses, excited the interest of those present.

FIELD CLUB RAMBLES.

April 13.—Meet the guide in the *East side* Suburban booking office at Liverpool Street Station at 2 p.m. for the 2.15 express to Broxbourne. Fare 2s. 6d. Walk through the fields, lanes and woods to Woodman Inn. Wormley West End for tea at about 5.30. Return trains at 7.30 and 8.55. Guide, Mr. C. Nicholson, 202, Evering Road, Clapton, N.E., to whom members should write before the 12th if they intend joining the party, so that reserved compartments and reduced fares may be applied for.

April 20.—Visit to Croham Hurst. Leave Victoria L.B.S.C.R. 2.30. London Bridge, 2.25. East Croydon, 2.59. Book to Selsdon Road. Meet at Selsdon Road Station at 3 p.m. Tea at Old Fox Farm at 5 p.m. Guide, Mr. E. A. Martin, F.G.S.

April 27.—Meet the guide in the East side Suburban booking office, Liverpool Street Station at 2.15 p.m. for the 2.23 to Chingford. Fare 1s. return. Ramble in Epping Forest. Return trains frequent. Guide, Professor Boulger.

May 4.—Ramble round Southfleet. Leave Holborn Viaduct, 2.25. St. Paul's, 2.28. Take cheap return tickets to Southfleet, return fare 1s. 6d. Meet at Southfleet station at 3.30. The times of the train should be verified from the May time table of the L.C.D.R. Guide, Mr. A. B. Wilkinson.

ANSWERS TO CORRESPONDENTS.

C. Nicholson.—We have several times referred to the subject of seal-skins and to the Humanitarian League pamphlet thereon. Anyone can obtain this from the League, but it is too lengthy for reproduction in our columns.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 16, Mount Ararat Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, A. J. WESTERN, Esq., 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 137. MAY, 1901. Vol. XII.

SELBORNIANA.

Annual Meeting and Conversazione.—The attention of members is directed to the announcement of the Annual Meeting in the last number. It will take place on Thursday, the 16th inst., under the presidency of the Right Hon. Lord Avebury, D.C.L., F.R.S., &c., when, in addition to the business of the year and the usual conversazione, a lecture on Mimicry, with lantern illustrations, will be given by Mr. R. B. Lodge.

New Edition of White's Selborne.— We hear from Messrs. Dent and Co. that they are adding the "Natural History of Selborne" to the "Temple Classics" series. This issue will be edited by Mr. C. Weekes, and reproductions of Bewick's drawings of birds will be used in it. The dainty form of this excellent series is well known.

Bibliographical Enquiry as to White's Selborne.—Mr. O. V. Aplin, of Bloxham, Oxfordshire, writes:—"I should be greatly obliged if any reader of Nature Notes who possesses a copy of the original edition of the 'Natural History of Selborne' would kindly say if in his or her copy the paging runs from 440 to 443, missing out 441 and 442 altogether. My copy is paged thus. I have compared it with the fine 1813 4to, and the letter-press in both editions corresponds exactly, so that I do not think my copy of the 1789 edition is incomplete: moreover the old-fashioned, but useful catchword at the foot of p. 440 proves this. If all the copies of this edition are alike in this particular, a curious mistake was made by the printers. And it may be worth while calling attention to the fact, if only to save from needless alarm any one who chances to discover that a cherished first edition lacks pp. 441 and 442."

IN AND ABOUT A WARWICKSHIRE PARISH.

THE things I have noted down in the following paragraphs have not of course been seen all at one time, in one walk, nor even in one season, though all in this parish. There is nothing fresh: they might have been noticed by any one in any midland country parish. Perhaps you may think that I have wasted paper and ink and time in recording them, but the "sights" themselves gave great pleasure, the memoranda whiled away some hours of a raw, cold night; and both the things seen and the writing them in this letter served to keep off an attack of what the Germans, I believe, call "heimweh"—a mild kind of home sickness to which my Yorkshire heart is subject. Charlotte Brontë and Emily, Yorkshire too, had this feeling at Brussels. Though, as they did, I miss the beautiful moors, beautiful and grand and awesome in their very monotony and solitude, there is to me—and you would find it so too—a compensation in the more populous bird-life among the trees and in the hedges of Warwickshire.

On Sunday, February 18, I had to take duty at Norton, which is three miles from here (Claverdon Vicarage). The deep snows of the preceding ten days had been nearly all washed away by the violent rain storm of Thursday: everything was sodden, raw, cold—it was still winter. A hedge-sparrow—the "cuddy" of North Yorkshire—with its bright eyes and weary chirping hopped about in a hedge: at the bottom of another hedge I saw a couple of wrens, like a couple of mice. On the gatepost of a cottage garden I saw a robin: he may have been waiting patiently for the door to open and his breakfast to be given him, but he seemed to share in the general depression. His tail hung down, his eyes seemed less bright than usual, he forgot to cock his little head on one side, he was quite indifferent to my approach. Instead of being a parson with a weakness for birds, I might have been the boy who carries milk to the cottages, and who throws stones at all birds and uses a catapult; but perhaps Robin *knew* I wasn't. It's vain speculating about the opinions birds have of us. This morning, however, Little Bobs didn't care a straw for anything or anyone. In this cottage garden, and in the strip of wood opposite, the nightingales sing in their season: the old lady who lives here tells me she cannot sleep for their "hooting;" but she means to be kind to them notwithstanding, for she throws out scraps of fresh meat and bread crumbs for them. She has *not* told me she has seen them feeding: according to her the above ought to be the diet of all birds. Miss H. never comes to the gate on Sundays to "tank" *i.e.*, to gossip with me, so I hurry on. As I pass the churchwardens' rickyard, there are the ubiquitous sparrows, of course, but no yellow-ammers or greenfinches. Birmingham sparrows come out to Claverdon to take the air, I am sure, for I

have seen some which from their very blackness—dirt, not colour—must have been born and bred in the city: the dirty sparrows come in flocks, and then, either they break up and settle or go back to town, at any rate the dirty squad disappears, or becomes clean and so unrecognisable, in about ten days' time. I notice you spell yellow-ammer with an "h." When I had my large text copy-book years ago I spelt it as above, so Chambers are responsible.

The long stretch of lime trees, which are so very beautiful and fragrant in spring and summer, are dripping: though the hum of bees is absent, they are not altogether deserted. There is a great tit standing on a twig hammering away, as a relative of his does all day long on the horse-chestnut outside my study window.

But amid all this damp, dreary depression, there was one little ray of light, one little sign of better things to come. The larks were still "congregate;" but two, as I passed, mounted a few feet above the level of the hedge, and favoured me with a bar or two. Yes, in spite of present appearances, I said to myself, spring is coming, the larks told me so. And spring came sooner than I thought for.

On Sunday morning, February 25, I had the same walk. The same walk did I say? I traversed the same ground, that was all. To you who have lived all your life in the town, I can scarcely tell how different the walk was from that of the previous Sunday. As I left the house and went down the drive I saw how full to bursting the lilac buds were. At the bottom of the drive, in the big elm tree, a throstle was singing. How could one help being reminded of Tennyson's beautiful lines, which not only tell us what the throstle sings, but so admirably how he sings it.

"Summer is coming, Summer is coming.
I know it, I know it, I know it.
Light again, leaf again, life again, love again.
Yes, my wild little poet.

"Love again, song again, nest again, young again.
Never a prophet so crazy!
And hardly a daisy as yet, little friend.
See, there is hardly a daisy.

"Here again, here, here, here, happy year,
O warble unchidden, unbidden!
Summer is coming, is coming, my dear,
And all the winters are hidden."

(I picked my first daisy to-day, March 12.)

In Lane's garden, to come back to my walk to church, I saw a very impertinent blackbird quarrelling with a couple of chaffinches—his "silver tongue" was using very bad language indeed. Chaffinches all along the road were singing their pretty little melody, like the Amen of a plainsong hymn tune. They no longer deserve to be called Cœlebs.

On Gannaway Hill I saw that some enterprising hedge-sparrows had set up housekeeping. I called, but no one was at home: the house was not quite ready for habitation. I wish the happy couple all success. Willie R., it is true, goes home through the gate twenty yards below, but their house is mighty conspicuous: other folk than myself go up and down the hill, and I fear some will call with less honourable intentions at the home of these little pioneers. The larks were no longer in flocks, but high up, out of sight, I heard them singing their sacred lauds.

In Gannaway Wood the wood pigeons were making their immoral suggestions. Do you know that here the call of the wood pigeon is interpreted "Tak' two coos (cows), Taffy; Tak' two cows, Taffy"?* Of course dear Sir Walter Scott says—

> "In answer cooed the cushat dove
> Her notes of peace, and rest and love."

But if, instead of being on the road, we had gone through the wood, we should have found that the notes were notes of war, not of peace. Even "cushat doves" enjoy a "scrap," and during their "scraps" they coo their loudest.

Yellow-ammers had not separated, nor had the long-tailed tits—"feather-pokes"—broken up their family parties. But spring was in the air, and my "little brothers and sisters," as S. Francis of Assisi would have written, felt and knew this as well as I.

Would I could finish this letter to you satisfactorily. In church I had under my eyes two ladies who sang, apparently with great devoutness, "O all ye fowls of the air, bless ye the Lord: Praise Him, and magnify Him for ever." The entire trimming of their hats was "feathers." The irony of it all!

This parish is exceptionally well off for birds, both for residents and for visitors, and also for travellers and passers by. I have seen more sea and water fowl here, in the middle of Warwickshire, than I did at my old home, which was less than twenty miles, as the crow flies, from the coast. Last October I saw two herring-gulls following the Stratford and Birmingham canal at Wooton Wawen: poor birds, I hope they got over "Brum" safely. One poor gull in the hot weather of last summer seemed very "done up," it was almost too exhausted to clear a high hazel hedge. In the late snowy weather a flock of geese flew over the top end of our football field during a match, and across the village at an altitude lower than that of some of the taller trees. Herons are very ordinary birds here: there is a heronry at Ragley, and I believe at Warwick. I saw herons at Wooton Pools last October; but I don't know if they nest there. I didn't stay to look about me: I was trespassing, and a guilty conscience hurried me on. I had no excuse to offer,

* [We heard the same interpretation in the south-east of England more than forty years ago.—Ed. *N.N.*]

had I been "caught," save that of taking a short cut to save time, which perhaps would not have weighed much with Mr. —— or the magistrates at Henley; so, like the gentleman in the "Pilgrim's Progress," I went on my way.

March, 1900. RICHARD R. V.

THE WOOD PIGEON IN LONDON.

DURING the last few years it has been observed, by those who take their walks in Kensington Gardens and Regent's Park, that various kinds of birds, which formerly were only to be met with in wooded country districts, have come and made for themselves a permanent home in London. The wary and unapproachable wood pigeon, whose cooing is so pleasantly associated with sylvan scenery far remote from the din of towns, can now be heard in the centre of the metropolis, and it has become so perfectly tolerant of its new surroundings that it roosts in trees and takes its food quite close to people, and shows no fear at their presence. This is a remarkable change in the disposition of a bird which hitherto has been so difficult to approach, persecuted as it has been by amateur sportsmen who find a ready sale for it as an article of food, and who are encouraged in many parts of the country by farmers' clubs which have been established for the express purpose of destroying it, and which offer a small sum of money for the head of every pigeon killed within the area of their operations. Farmers who have adopted this course have not been actuated by a feeling of malignity specially directed against the wood pigeon, but have had to resort to it in pure self-defence and in order to save their crops of wheat, barley and turnips, from the havoc they are known to work. Another reason, however, may be found in the diminished supply of food for such birds as live on grain, in consequence of a large extent of land in the neighbourhood of London having in recent times ceased to be ploughed and come to be used for pasturage and hay crops. But whatever may be the causes which have sent the wood pigeon into the metropolitan parks, here he is and he shows every intention of having come to stay. That he is satisfied with the welcome and security offered him is evident from his suffering pedestrians to come close to the trees on which he perches, and affords a striking contrast to his kindred in the country which fly from the approach of man as if only evil can come of it. But it is not only in the Parks that the wood pigeon is content to dwell, as an instance of its recently developed tameness which has just come under the writer's observation will show.

Three years ago a pair of these birds began to visit the lawn

at the rear of his house and feed on the bread crumbs which are daily thrown to the sparrows and starlings which have long looked upon the supply as a regular and reliable dole. The starlings and sparrows are early morning visitors, and the larger pieces which they are unable to dispose of have been picked up at a later hour of the day by two wood pigeons, which are big birds, and endowed with a large capacity of swallowing bread crusts. This has gone on till the beginning of last Spring, when the pigeons took a new departure by building a nest in a tree which is about twenty feet from a bedroom window. The house, it may be stated, is about two miles distant from Kensington Gardens, and a little more than a mile from the nearest point of Regent's Park. The proximity of the nest to the window has given a favourable opportunity of observing the manner of its construction, of seeing the process of hatching the eggs, and of rearing the little family from the day of their birth to the time when they were able to take their flight under the guidance of their parents.

The writer, when a boy, was familiar with the nest of the wood pigeon. As known to him it was invariably placed upon and between two branches of a Scots pine, close to the trunk of a tree, and the exquisite piece of basket work, which was woven of slender twigs, was so thin that the eggs could be seen through the fabric, but the whole was so firmly knit together that it withstood the strongest gale uninjured. In colour and general appearance it looked like a portion of the tree itself, and it was a difficult matter and tested the sharp and practised eye of youth to discover it. In the present case the nest was differently situated, being laid in a cleft of a poplar tree where the stem divides into four branches. It had not the look of those with which the writer was familiar, being apparently more solid in texture, but the mode of its construction was doubtless the same as in the case of a nest placed between two boughs growing at right angles to the stem of a pine. How the weaving of the twigs to form the nest was accomplished was a mystery to the writer until the Spring of this year, when he saw the thing done at a convenient distance for observation. It took both birds to do the work; the hen bird sat and quietly wove one end of a twig into the nest while the other end of it was firmly held by her mate, who remained standing while the operation was carried on. As soon as the one end was secured, the male bird surrendered the end he had been holding and at once flew away to get another twig; and when he left, the hen seized the unsecured end and wove it in and out till it was made fast and formed part of the nest. Having disposed of the twig, the hen rested from her task and remained sitting until her mate arrived with another, and then the two repeated the operation as before. This proceeding went on daily from early dawn, and ceased regularly between eight and nine in the morning: the birds then departed, nor did they on any occasion put in an appearance

till the following day, when they again resumed work. This continued with the greatest regularity until the nest was completed.

As soon as the nest was completed the birds devoted themselves to the business of hatching. Every morning after the eggs were laid, one of the birds arrived between eight and nine o'clock and took up a position about ten feet from the nest, and upon this the one who had been hatching left immediately. The newly arrived bird did not go to the nest at once, but remained where it had alighted for nearly a minute. At the end of that time, and when it had apparently recovered from the fatigue of flight, it walked along the bough which led direct to the nest and, when it was within three feet of it, stopped for a quarter of a minute, looking all round to discover if any one was eyeing it, or if any danger threatened. When satisfied in this respect it hurried to the eggs, surveyed them with supreme satisfaction and then stepped upon the nest; but it was easy to see that the eggs were carefully turned by the feet, before it sat down to impart the necessary warmth to them. Every one who has had experience in the management of an incubator knows that once a day the eggs must be taken out into a cool place; and that when restoring them to the heated chamber they should be turned quite round. Should this cooling and turning not be done, artificial hatching proves a failure. Precisely the same thing was done by the wood pigeon before sitting down upon the eggs.

The point worth noting is that the shyest of wild birds, having food put daily for their use during three years, have lost their fear of man and taken up their quarters close to a window whence their operations of nest-building, hatching eggs, and feeding their young have been carried on, quite open to observation and in confidence of protection. The bedroom window has been left open all day and many persons have looked at the confiding sitters, without in the least disturbing their equanimity. On one occasion only has any interference with the order of things taken place. While the bird was hatching the eggs, or sitting on the young ones, it invariably turned its head away from the window as if no danger could come to it from *that* quarter. A friend having proposed to take a photograph of the nest, and as a back view of the bird was not considered satisfactory, it was found necessary to shake the window frame and tap the glass so as to get the sitter to turn round and give a front view of itself. The noise was effectual, the bird turned round to see what it all meant, and a snap-shot was taken: as soon, however, as this was done the former position was resumed. A fairly good picture was obtained, the lateness of the season and the consequent non-appearance of foliage having favoured the attempt.

St. John's Wood,
London. M.

AN ABJECT REPTILE.

"THE most abject of reptiles and torpid of beings distinguishes the hand that feeds it, and is touched with the feelings of gratitude." Thus says Gilbert White of the land tortoise of which he wrote, and of which he mentions that it knew the old woman who gave it food, and "hobbled towards her with awkward alacrity." But it is not on the whole an encouraging character for a pet.

Mine was the chosen of three laid out on the counter, because a small one which put out its head and waved its legs, at 1s., seemed a better investment than an ample but inert mass of shell at 1s. 6d. His shell, too, was very clean and shiny and quite perfect. Placed in a brown paper bag he was handed over with the assurance that he would survive a twenty minutes' walk unsuffocated; but the day being warm the bag was kept open to be sure that the creature kept right side up, and did not scrape himself a way to destruction.

During the first fortnight in his new home the weather became colder and his behaviour was not exhilarating; still he looked nice and harmless, and there was no danger (to him) in his being fallen over whilst he lay wrapt in thought for hours on one spot on the floor. At night, the room being warm and lamp-lit, he was more active, and he would be heard suddenly clattering over the parquet, or trying to skim up the old-fashioned steel fender, unappalled by the intense heat of the metal: he soon knew his way about and was very much at home. Many people had ideas about his diet. At the shop they had told me to put him in the garden (a London back-garden!) and he would feed himself; but the garden is so overshadowed by trees that nothing but a few spring bulbs, some ferns and scraggy shrubs can live in it, so the reptile's earliest spring meal was bread-and-milk in a doll's dish, which was at just the right level. He walked across the dish after a few mouthfuls, with his peculiarly high and disastrous action, distributing sop on the surrounding carpet, so most of his future meals were spread in the garden. One friend said "Give him slugs, or even worms"—so the latter, of the most tempting proportions and colouring, were dug out and laid before him, but in vain. He took a mild observance of their wriggling and let them escape. Woodlice he followed with his nose, but their activity was bewildering, and when they came out unexpectedly from beneath his shell or between his feet he was clearly surprised at their temerity and unequal to revenge. Slugs, although carefully selected, were a failure. He was carried to the so-called fernery, and a large paving-stone being overturned, he was set down in the midst of a varied animal population. Slugs lay bulky and shiny like stranded whales, woodlice skurried aimlessly, worms writhed to cover, and great centipedes made for the shelter of our bootsoles, routing us on to the path below.

The abject reptile seemed stunned at first by the bustle around him—a countryman in the Strand: then he turned and fled—anywhere out of the crowd: he did not wish to "dwell in the midst of alarms." On cool days he lay *perdu* among some iris roots, but in sunshine he came out and caracoled on the gravel with his ungainly rocking action, stopping to explore with his nose or crop some ill-advised green thing in his path. In the really hot weather he was ravenous, and his bill for lettuces and cresses ran to several pence a week, for he loved them crisp and moist, to crunch in his toothless jaws. Pieces of stalk which refused to go down made him blink and gulp alarmingly, whilst drumming on his shell seemed hardly local enough as a treatment to give him relief. But beyond all he loved strawberries, and for one of these he would hurry across the gravel and grab and snap at the dainty, all his shyness gone and replaced by a ponderous facetiousness which made him seize the fingers which fed him and leave a visible pinch on the skin. There was a cornelian ring, too, which he supposed to be a succulent fruit, and which he would boldly scramble after, and bite vigorously, if the hand wearing it was within his reach. Cherries and raspberries he also delighted in, hanging on to them till his flat-featured face was besmeared with juice up to the eyes, and helping himself with his claws when in difficulties. And if the *menu* was too short for him he called for more by standing before me with his head up and snapping his jaws; or, if I sat on the ground, climbing on my dress and trying to forage for himself. He occasionally drank some water if put in the bird's shallow saucer, but preferred moisture in the form of green food. The midsummer heat made him very gay, and he would often be seen hastening over the gravel with rather more grace and less agility than a Vestry mud-cart.

In autumn weather the shop-people were consulted as to where he should winter, for he showed a tendency to bury himself in the mould, and they said a greenhouse would suit him; but the only one available, size about 9 feet by 5 feet, was never warmed, and after a night there on clammy tiles his comatose condition and Alpine temperature were alarming. He was then put in a fern box, under tall leaves, and safely surrounded by wire netting. This offended him deeply, and after various attempts to strangle himself in the meshes he was rescued late at night, very indignant and hissing loudly. Kind friends made suggestions for his comfort. One said their tortoise, a pet of youth, had always wintered in a kitchen cupboard in an old hat; but one shrank a little from the headgear, masculine or feminine, which should have come to a stage when it was offered as a hybernaculum, and to visit Jermyn Street or Bond Street for the latest fashion seemed an excessive yielding to the luxury of the age. There was also mention of a tortoise which wintered in a cupboard and was found to be only shell—and, well, you may alter one letter!—in the spring.

So the most torpid of beings has an old wooden chocolate box with half a lid and one side out, and a bit of flannel at the bottom, in a corner of the library. If the half lid is shut he is often still till evening, when lamp-light and the snug warmth o a shuttered room awake him, and he pops up from beneath it, like a Jack-in-the-box, the scrape of his scrabbling claws (of which some are missing) startling the unprepared visitor. He goes forth to explore, choosing chiefly for his walks the hearth-rug, and the neighbourhood of the window. He often rises up and peers over the side of his sleeping apartment, propped on his hind toes and waving his fore legs dramatically. Surely he preaches, and at "lastly" he overbalances with a thud, and lies, a humiliated upside-down until he is re-adjusted. He has not tasted food during the winter, and only walks straight through his blue dish if it is filled and placed before him. It is not easy to see if he is thin, his complexion is healthily bronzed and his bead eye is bright: he is friendly, too, liking his owner to rub his head gently, and allowing an enthusiastic youthful admirer to kiss his nose and call him "darling," without troubling to withdraw that noble feature under his shell. He is not naturally timid, and only tucks himself away if some moving object dawns suddenly on his apparently limited horizon, or if the cats are too presuming. Outwardly cold and unresponsive, he has a certain blandness, and toleration for liberties taken, which make one fancy a little warmth somewhere within, and a special acknowledgment of his owner's attentions. And then he does not excite too much notice or covetousness among visitors: he does not display such cleverness as to make one anxious for his brain: he does not bite or scratch: he is a very negative sort of pet. He is not, I must own, very useful or altogether ornamental, and he gives some sensitive souls "the creeps." Silent, amiable, inexpensive, untaxed and easy of control, he has points of his own; and one hopes, in spite of his pre-historic appearance, that he has many peaceful winters and good strawberry summers yet before him.

K. J.

VARIATION IN ORCHIS MACULATA.

IT is well known that the colour of the spotted orchid varies widely from white to reddish-brown purple. My attention has lately been directed to this point because it seemed to be analogous to certain biological aspects of pigmentation which I have been studying more especially in man. The spotted orchid is very common in this neighbourhood, but I have chiefly examined it along a patch of cliff, some 200 or 300 yards long, in Carbis Bay, and facing in a northerly direction. Where the cliff bends round to the east the orchid is

no longer found: the dark flowers grow at the north end and the light at the east end, the two groups merging into each other, but no very light flowers are found at the north end and no very dark flowers at the east end.

On June 15, 1900, about a week after the orchid first appeared, I gathered forty specimens at this spot, and found that on the basis of flower colouration they could be divided into eight groups, of which the first was nearly white and the last a darkish purple, while the other groups were of intermediary shades. The two extremes were so unlike that, even to a botanist, at the first glance, they seemed to belong to two species. About a fortnight later, when the orchid had reached its full development, I gathered thirty-five specimens. These showed no characters not noted on the first occasion, but the detailed remarks which follow refer only to the results of the second collection.

On the basis of flower colouration I divided the specimens into four groups. Group A. (ten specimens) showed flowers that were almost white, the petals, apart from their small violet spots, only very faintly, or not at all, tinged with violet; Group B. (eleven specimens) showed petals of a distinct, though very pale violet, while the spots were darker; Group C. (eleven specimens) showed petals of a pale purplish violet, while the spots were still darker and tended to run into wavy bands of colour; Group D. (three specimens) showed still darker purplish petals, sometimes almost as dark as the bands. We thus have two groups that may be called light, and two that may be called dark.

The pigmentation of the stalk (invariably short at the spot investigated) ran without exception *pari passu* with that of the flowers: while almost absent in A., it became a dark brownish purple in the upper part of stalk in D., as also the bracts which in A. were very pale green.

The leaves of *Orchis maculata* are spotted with blackish pigment, whence the plant's name. This pigmentation is very variable, and at first I was inclined to think it had no relation to depth of flower colouration. I found, however, that though B. showed some of the most deeply pigmented leaves, all the pale-leafed specimens were in A. and B., while C. and D. showed no very pale-leafed specimen.

With these marked colour variations were associated certain morphological variations. The lip of this flower tends to form three lobes, but while in some of the specimens the middle lobe was on the same level as the outer lobe, in others the middle lobe formed a tongue projecting considerably beyond the other two lobes. In the light groups, A. and B., the lip was of the first type, with occasional very slight tendency to the second type in B.; in the dark groups, C. and D., it was always of the second type.

Another character of this orchid is its honey-like odour. In A. I found this odour distinct in every specimen, as well as in

the group as a whole; in B., while the odour of the group was as distinct as that of A., some of the individual specimens possessed little, if any, perceptible scent; in C., while one or two specimens had a faint specific odour, the group as a whole had a vegetable odour but no specific scent; in D. there was no odour, either individually or collectively.

It will thus be seen, not only that *Orchis maculata* tends to vary alike in colour, form, and odour, but that all these variations tend to be closely correlated.

The tuber in this orchid also tends to vary, being either palmate or ovoid; but beyond ascertaining the fact of this variation, I made no observation as to its relation to the other variations noted.

Carbis Bay, Cornwall. HAVELOCK ELLIS.

On receiving this article last autumn we called the attention of the writer to the following passage in the Rev. E. F. Linton's then recently published "Flora of Bournemouth":—

"*Orchis maculata*: sub-sp. *ericetorum*.—More slender than the type; stem usually somewhat purplish above; leaves narrower, more or less recurved, even the lower cauline more or less acuminate, carinate and folded; spike 1 to 2 inches, broadly pyramidal, at length oblong; bracts purplish; flowers pale, scentless, with rose-purple markings, ground commonly white or tinged with pink, but sometimes of deeper colour; outer line of markings nearly or quite complete; nectary slender, slightly enlarged or not at all upwards, throat narrow; lower lip sub-orbicular, rounded in outline, rather spreading; mid-lobe much smaller than the broad obliquely truncate or crenate lateral lobes, not exceeding them in length and usually shorter or somewhat recurved.

"Compared with this sub-species, or rather species, if a sufficient number of these distinctions are found on further examination to hold good, the type is rather a stouter and commonly bigger plant, with broader, straighter leaves, less carinate and folded, frequently flat, spike $1\frac{1}{2}$ to $2\frac{1}{2}$ inches, ovate-oblong in flowering, oblong at length, bracts more usually (? always) green; flowers with dark rose-purple markings (the outer line *pl. m.* disjointed) on a pale rose-purple ground; faintly aromatic (? always); nectary stouter, enlarged upwards, throat gaping obviously; lip deeply 3 cleft, vertically pendent; lobes sub-equal, lateral obliquely oblong crenulate; mid-lobe deltoid-oblong or deltoid-acuminate, distinctly exceeding and not much, if at all, narrower than the lateral, usually straight.

"These two plants have a wide distribution in Britain; sub-sp. *ericetorum* has been noted from Caithness and Sunderland to the south coast and Guernsey, also from co. Wicklow. A supposed hybrid between the two occurred in Glen Lochay, Perthshire, but they are seldom found in the same locality."

Mr. Havelock Ellis, in reply, points out that the only at all

definite and regular distinction between Mr. Linton's two "species" seems to be the relative size of the mid lobe of the lip. Many other so-called species, however, have no more striking differentiæ. Mr. Ellis further points out that he has only dealt with his own observations in one limited locality, and suggests that we should call on our readers in all parts of the country to report on the characters and most common variations of these orchids in their respective districts, "such reports to be editorially collated and discussed." "A minute investigation of a single species would," he adds, "surely be useful to botanists, and would certainly be valuable to many who are working at the wider problems of biology." We can only add that we hope that our readers will act on this suggestion, and also, if possible, send us fresh specimens of the variations they find.—Ed. *N.N.*

REVIEWS AND EXCHANGES.

A Garden of Simples. By Martha Bockée Flint. David Nutt. Price 6s. net.

Our kinsfolk across the Atlantic have outlived the crudely utilitarian struggle for existence of the new country, the colony or the nation in the making. They have made a literature of their own and have evinced keen artistic sympathies. It is not, therefore, to be wondered at that, especially when revisiting the Old World, they are profoundly attracted by the quaint charms of old-time leech-craft, wort-cunning and kindred folk-lore. We have had of late, from the pens of Englishwomen, a considerable number of books on plant and garden lore, books in which Gerard and Parkinson are discovered and re-discovered perhaps a little too often; but we do not think that many of these works have surpassed the present volume of unpretentious little essays in that subtle charm that is begotten of enthusiasm. Slips there are, as when "the *Cheilodonium*" (*sic*) "with the acrid, orange juice" is styled "Wordsworth's golden celandine," or when orpine is called *Sedum telephum*; but these are but few and trivial, whilst, apart from the merely elegant telling of well-known lore, the book is full of out-of-way information, European, as well as American, of an antiquarian character. As a slight specimen of Miss Flint's manner we may this month appropriately quote the following on *Azalea* (miscalled *Rhododendron*) *nudiflora*, from the essay entitled "Paas-blumtje and Pingster-Bloem":—"This peerless azalea is familiarly known in New England as the honeysuckle, the swamp pink and the May apple. The latter name comes from the irregular excrescence, pale green and glaucous, growing on the leaves when stung by an insect, which there deposits its egg. Cool, crisp and juicy, they are the delight of children, and put for a day in spiced vinegar, make the first pickles of the year.

"But the name by which this May queen of our northern flora is dearest to New Netherland families, is *Pingster-bloem*, the flower of Pingster or Whit-sunday. In the seventeenth century, the rocky glens and woodland glades of the island of Manhattan were all aglow with this pink azalea, blooming over a period long enough to connect it with that movable feast, by the Dutch revered only less than the festival of their own patron saint. With the prescribed religious observances the Pingster days had many features of the Saturnalia and were, in that staid community, a time of unwonted license. The slaves had then their holiday and held riot, awakening on the banks of the Hudson the wild echo of strains which had been chanted on the Congo and the Gambia. But the custom in Nieuw Amsterdam which is fairest in retrospect, and which lingered longest, was the gathering of the Pingster-bloem."

The authoress then goes on to speak of the *Pasquata rosata* of Italy, the peony

as the Pentecost rose of Germany, and of the rose, broom, birch, box, guelder rose and lily of the valley, as associated with Whitsuntide in England. The printing and binding of the volume enhance its charm.

Received:—*Knowledge*, *Science Gossip*, *The Naturalist*, *The Naturalist's Journal*, *The Irish Naturalist*, *Humanity*, *Our Animal Friends*, *The Animal World*, and *The Agricultural Economist* for April.

NATURAL HISTORY NOTES AND QUERIES.

Hedgehogs sucking Cows.—The belief that hedgehogs suck cows lingers on still in country places; and it is one that has interested me for many years. Farmers have gravely given me as a reason for a cow's milk failing, that she had been sucked by a hedgehog. I have made many enquiries, and have always had the same kind of answer; either that my informant had heard it years before from some old neighbour who was supposed to have seen it when a boy, or that his grandfather—why not grandmother?—had told the tale. No one I have questioned has ever caught a hedgehog in the act; and I venture to think no one ever will. Is it likely that a cow would let a sharp-clawed prickly little animal come near the tenderest part of her body, or permit a tiny mouth full of teeth like needle-points to seize hold of her teat? The teat would be too big. Supposing she allowed these liberties, how much milk could a hedgehog swallow? A teacup full? At this rate it would take a dozen or two to drain the udder. They would be sure to squabble for their turn to suck, and the prickles would come into play with a vengeance. The whole thing is a myth.

Market Weston, Thetford, March, 1901. EDMUND THOS. DAUBENY.

Albinism in Moles.—Your correspondent "S. B." may be interested to learn that albino moles sometimes "breed true"—apparently, at any rate. For in the "Proceedings" of this Society for 1860 (p. 206), it is recorded that nine albino moles were caught in the same meadow in Kent.

Zoological Society's Gardens, April 4. FRANK E. BEDDARD.

There is in the museum here a specimen of a white mole, but I have never seen a live one myself. The Montreux Museum is an interesting one, and the curator intelligent, but the setting of birds and animals is generally on the old-fashioned system, without regard to life. The best Natural History Museum that I have ever seen is that of Mr. Hart, at Christchurch, in Hampshire, and his methods are being copied in London. Many naturalists go from London to the New Forest to spend a happy day; let them prolong their journey to Christchurch and have an hour's conversation with Mr. Hart, and they will be amply repaid. It may be as well to mention that there are also white otters, though I have never seen one. These albinos are not white, but rather what we call cream-coloured. The white rats however that I have seen are pure white.

Montreux, April 4, 1901. GILES A. DAUBENY.

A Mole gathering Leaves.—On Saturday, the 23rd inst., while strolling along Golders Green, Hendon, my attention was drawn to the ditch at the side of the path by a rustle amongst some dried leaves. I stood still for a few minutes and listened. Presently I saw a black head peep out of a hole in the bank. At first I was inclined to think it was a rat, and was rather surprised to see crawl down the bank, a large black mole. An omnibus coming along at the time startled the creature, which retreated to its hole. When it came out again I could see the animal's object, for it began to gather the leaves into its burrow. Can anyone tell me whether these animals breed at this time of the year?

2, *Canonbury Place, Canonbury, N.* CHAS. E. J. HANNETT.

Moles.—Last year when turning over a heap of old sods in my garden I unearthed two young moles, one rather larger than the other. I could not find

more: they were very inanimate and cold and resembled, with the exception of their snouts and massive feet, young rats, with hardly any hair, and that then was in patches. I restored them to their mother after considerable trouble. It is not given to everyone to find a nest of moles.

Rhyl. F. L. RAWLINS

Moles and Weasels.—I look upon weasels as one of the mole's greatest enemies; and have not unfrequently heard of mole-catchers taking weasels in their traps. Not long ago I watched a pair of weasels for a considerable time. They visited every hole and corner in the hedge and open ground around me; and several times I succeeded in calling them out of the runs made by moles which they had entered. At last they ran down the road past the village school, and I drove them back into the field, for I feared they would be seen, and their lives forfeited. Round here game is carefully preserved, and moles flourish to such an extent as to be very troublesome. This I attribute in no slight degree to the scarcity of weasels; and the more I penetrate into the gamekeepers' domain the more the signs of moles are to be seen. In short, in a part of the world where rats, field mice, and moles are a scourge, a few pairs of weasels do much useful work.

Market Weston, Thetford, EDMUND THOS. DAUBENY.
April, 1901.

Bats.—The superstition (*sic*) regarding bats taking a special delight in entangling themselves in the hair of girls and clutching the head, which Captain Daubeny alludes to, is not at all confined to Russia. I think it is common to most countries of the continent. I remember when I was a girl at school in Germany that the German girls believed in it thoroughly. Sometimes a bat found its way into the plain little Moravian chapel during the quiet Sunday evening service, and we all watched it with feelings of terror, the little white net caps which we wore in church being, we considered, no protection from the clutches of the ill-omened creature.

JEAN A. OWEN.

Field Mouse.—When removing a hive of dead bees last week I found in the back of the hive a nest containing a dead mouse. I do not think field mice hibernate. I knew this mouse was about, as he was making free with my apples. I have been wondering whether, having made no provision for his winter supply, he died when the apples were exhausted; and I want to know, too, why these mice only sleep one in a bed?

Rhyl. F. L. RAWLINS.

Is the Water Rat Vegetarian?—That he certainly is. I have often watched him feeding on the tender red shoots of the willow. But is he entirely so? When a little boy I often fished in a small Welsh mill stream, between two bends of a larger river. In this was a large shoal of salmon-fry, which had been prevented from descending to the sea, and were pent up within a small area. Every hour or so, a rat dived from its hole in the bank and returned with a silvery fish in its clutches. At the time I supposed it to be a "water-rat," but have since doubted whether it was not one of the common brown species. The question is one of some importance—to the rat; but it also concerns the fish. I remember the publication of the Rev. J. G. Wood's works, which loudly proclaimed the inoffensiveness of the water-vole. The animal had previously been regarded as destructive, and had been shot at sight accordingly. It then forthwith received complete immunity from the keeper's gun. Does it wholly merit this? I should be glad to learn if the point has been authenticated by dissection or otherwise.

6, *Gloucester Place,* HERBERT SNOW.
Portman Square, W.

Pole-cats.—I shall feel obliged to any members who will report the appearance of pole-cats. I saw in the paper last week that one had been caught near Moulton. I am afraid they are practically extinct.

Rhyl, N. Wales. FRANK L. RAWLINS.

Homing Instinct in Pigs.—Domestic pigs are not generally considered to be romantic animals, so that all lovers of anecdote will, I am sure, welcome

the following account, instancing the attachment to home which is inherent in these animals. The story is absolutely authenticated, and was told me by an eye witness, so that it admits of no contradiction. The lady in question, who keeps a large farm at Henbury, near Bristol, agreed shortly before last Christmas to sell eight young pigs about six weeks or two months of age to a native of Sea Mills, a village situate about three and a-half or four miles from Henbury. Accordingly a man drove over, caught the pigs and deposited them in a sack at the bottom of his trap and took them away with him. Three or four days subsequently he came one evening to enquire of the lady if she had seen the pigs, as they had all disappeared. To satisfy the man she directed one of the farm-hands to count over her own pigs to make sure that the missing ones had not returned: to the surprise of all one was discovered, and was identified by the fact that its recent purchaser had put a ring in its nose, whereas none of her own pigs had as yet been "rung." This was the only pig they could discover at the time. However, about an hour later her son ran indoors and said that another of the pigs was on its way home also. On going into the yard she was surprised to see this little pig, number two, racing at full speed down a steep field about half a mile from the house, and making straight for the farm. Even at a distance she could hear its squeaks, and these were redoubled until, on its arrival, it could hardly contain itself for joy, and ran grunting and squeaking into the "pen" where so many weeks of its life had been spent. The other six pigs were not found until some days later, when the purchaser on passing a tree on the top of a hill, about midway between Henbury and Sea Mills, heard a faint squeaking, and on going to the tree was astounded to see the six defaulters rush out from a cavity at the base.

Not the least curious part of the story is that the first pig was seen making its way home by school-children in various parts of the vicinity and that its return was *via* the main road. Now the question presents itself, how is it possible that young pigs, which had never in their lives been outside the "pen" in which they were born until they were taken away in a cart and tied up in a sack, find their way home, and not only this, but by different routes—one across the fields and the other round the main road? I cannot pretend to suggest an answer. I have read of cats, dogs, pigeons, &c., finding their way home under circumstances somewhat similar, but it could always be partially explained by the supposition that they had roamed far and wide round the country and so knew their bearings well, but in the present instance this view is obviously out of the question.

The eagerness of the pigs to return was not unnatural, seeing that on their arrival at their new home they had been obliged to submit to the pain of having their noses "rung," a circumstance they would naturally associate with their recent removal from their old quarters. This is but one of many instances, less striking perhaps, which have occurred on the same farm, and bears eloquent testimony to the kindness and attention bestowed on the various dumb animals under the lady's care.

Fylton Rectory, Bristol. A. C. MACKIE.

Birds Singing when Abroad.—Not long ago I saw with great interest the various collections of a military friend who has just returned to India, and who had struck new ground in working up Indian hymenoptera. He is an accurate and ardent observer and has been in many parts of the world. In answer to my query as to whether our migratory birds sing when away from us, he writes: "Birds sing chiefly at breeding time, consequently if they nest in England they do not sing much, if at all, abroad; but birds that pass the winter in England and nest abroad sing, if they are singing birds, chiefly abroad." This agrees with my memo. on p. 36 of this year's NATURE NOTES, and also with Mr. Aplin's kind and excellent answer in the number for April.

Market Weston, Thetford. EDMUND THOMAS DAUBENY.
April, 1901.

Frank Heron.—The Rev. A. F. Curtis enquires on p. 65 as to the meaning of "*Frank* Heron," a local bird-name in Essex. The prefix "*frank*" no doubt refers to the harsh cry of the heron, which is thought in Berks and Oxon, and probably elsewhere, to resemble the word "frank."

Fyfield, near Abingdon. W. H. WARNER.

The Rev. A. F. Curtis asks if anyone has ever heard the name *Frank* Heron. We have a heronry within a mile or two of Peterborough and the birds are therefore fairly common here, and when I was a boy I frequently heard my grandfather speak of the herons as Franks or Frank Herons. I cannot say I have heard the term used in late years. I understood the name was a popular or folk lore name, and had its origin in the note of the bird.

Broadway, Peterborough, W. H. Bernard Saunders.
April 8, 1901.

General Lee and the Sparrow.—A good man's true sense of character and love of nature is often revealed by a noble yet simple action. A story is told in an illustrated article in *The New Penny Magazine* for March 2, of General Robert Lee, who was Commander-in-chief of the Confederate Army in the American Civil War. The toils were closing in upon Richmond, and not even Lee's courage and skill could finally keep the foe at bay. When disaster looms large on the horizon, a spirit of bitterness and self-seeking is apt to invade men's hearts. But General Lee's nature, instead of deteriorating, revealed itself more brightly. One day he was inspecting a battery on the lines below the city, and the soldiers, whose favourite he always was, gathered into a group to welcome him. The action drew upon them the hot fire of the Union guns. The general noticed it, and he faced about and advised the men to go under shelter. But he did not do this himself. He walked coolly onwards, at the risk of his life, and picked up and replaced an unfledged sparrow which had fallen from its nest in a tree close by the battery. This lit le action of compassionate pity on the part of General Lee reveals to many that even the soldier in the time of war is not so heartless as people are apt to think him to be.

2, *Canonbury Place, N.* Chas. E. J. Hannett.

Vipers and their young.—I have nothing original to offer on this question in reply to Mr. Westell's suggestion; but the following editorial remarks in the *Field* of March 30 will show that there are still people who are sceptical on this point; and that there is an honest penny to be turned by satisfying their own test. "Like Brusher Mills, of New Forest notoriety, Colonel L.'s informant has no doubt in his own mind that he has seen a viper swallowing its young; but, also like Brusher Mills, he has never been able to secure a specimen that had done so, tie a piece of string tightly round the throat, and forward the specimen to us for examination, and secure the reward that has been so long offered in vain for a specimen proving the alleged facts."

F. M. Millard.

Cockneys and Toads.—The members of the choir of a London celebrity, lately deceased, were once asked to spend a day at a friend's house in the country. On the lawn a number of seats had been provided for them round a large bed of evergreens. The ladies of the house, who had left their guests for a short time to see after the arrangements for tea, found on their return that the Londoners had reversed their seats, and were gazing with scared looks into the bushes. On being asked the reason they said they had just seen a toad, and thought they had better face him.

Market Weston, Thetford, Edmund Thos. Daubeny.
March, 1901.

The Toad in a Hole.—Like the large gooseberry, the toad in a hole is too often with us. I do not know the place of origin of the following cutting, but it was cut from the *Ulverston Advertiser* of March 14: "The Rev. W Buckland, from experiments on toads in holes of oolitic limestone and sandstone covered with glass, finds that while limestone preserved them alive, sandstone killed them. His conclusion is that unless a toad imprisoned in a stone gets a little air it cannot live a year, and unless it gets food it cannot live two years." Unfortunately these fictions will be no fewer if it is absolutely proved that the creatures could not possibly have existed during the formation of the rocks, let alone the question of heat and pressure involved in the making of "a piece of coal" (see p. 77). There may be, as the Editor puts it, "no wilful imposture"; but, things being as they are, it is on the face of it (to use a mild term) unlikely.

Ulverston. S. L. Petty.

[The cutting from the *Ulverston Advertiser* suggests a new question, almost as interesting as that of bufonic longevity, viz., the longevity of a newspaper paragraph. Is it possible that "the Rev. W. Buckland" who "finds [*sic*] from experiments on toads that" they require air and food is a certain Rev. William Buckland, D.D., Dean of Westminster from 1845 till his death in 1856?—*Ed. N.N.*]

May I appeal to "Rugby Selbornian" to seek the release of the unfortunate toad which is condemned to die of starvation hastened by suffocation, for the simple reason that he was wise enough to object to being burnt alive. It needs very little reflection to convince even the most unscientific person of the absolute impossibility of the toad being actually embedded in a lump of coal. As you, Sir, have so convincingly pointed out in your note, toads are a geologically modern species and therefore could not be found in a lump of coal. We all know that they constantly seek to pass the winter months in coal-cellars which are both damp and comparatively warm, and there is little doubt that very many are burnt in fires, when in the sleepy state common to hybernation. This poor toad has suffered dearly for his escape from death by fire. As regards the vitality of toads and frogs the following may be of interest. I had occasion to assist in opening a Roman Well, in a field in Wiltshire. When we had dug down about twenty feet the water came in; and, as further operations were impossible until the following autumn, we placed logs over the mouth, replaced the soil and a crop of wheat was grown over it. Nearly a year after, we removed the soil and logs, in order to proceed with the work, and then found several pails-full of starved frogs, which, having jumped down, had remained imprisoned for close upon a year. They were almost skeletons and only just able to move their limbs. Both toads and frogs are hungry creatures, and only look "flat" as described after passing the winter in a semi-comatose condition. I have both kept and fed many and should like to have the pleasure of feeding up this unfortunate victim of ignorance. I sincerely hope that your correspondent will expose this ridiculous newspaper story, break the bottle and release and feed the starving victim if it is not already suffocated: if he does he will, I am sure, earn the gratitude of many a Selbornian.

Tilford, Farnham, Surrey. ROBERT MORLEY.

The "Venomous" Toad.—I venture to make an enquiry of you, the answer to which will be of interest both to naturalists and Shakespearians.

When in Jersey a short time ago, I saw in the garden of a farmer a young gull which looked very ill. The farmer said he was afraid it was going to die, as its brother had that morning. He said they had found a toad, and both the birds had eaten of it. Can you, or any of your readers tell me whether there is anything poisonous in toads? If the Jersey farmer was justified in imputing the bird's sickness to this cause, it will remove almost the sole example of Shakespeare's inaccuracy (as it has been considered) in description of natural history. To call the toad "ugly and venomous" has generally been thought a libel on a harmless and useful, if inelegant, animal. If its body has poison enough in it to kill gulls, Shakespeare's epithet is correct, and his accuracy vindicated.

18, *Highfield Road, Edgbaston.* R. F. MARTINEAU.
April 9, 1900.

[There seems a want of certainty as to the fact of the gulls eating the toad. Most birds refuse to do so, probably from an unpleasant taste. A toad would presumably prove a very indigestible meal; but there can be little doubt that Shakespeare used the word "venomous" in its usual sense of actively, not passively, poisonous. I remember being told in my youth that a grass snake would venom me.—ED. *N.N.*]

Midges.—Are you aware that these little pests congregate in the winter in masses and hybernate? I was not, until I cut down a pollard surmounted by a huge mass of ivy. Besides starlings' and sparrows' nests in the branches, the hole contained a great lump of midges. I took them at first for dust or sawdust, but on closer inspection I found that the mass was—more or less—alive. They were shovelled into a wheelbarrow, which they nearly half filled.

Nascott House, Watford, March 15. GEORGE ROOPER.

Ivy on Trees.—I can quite endorse Mr. George Rooper's observations as to the trees at Watford which are ivy-covered and which certainly do not seem to have suffered in any way thereby. I have one or two photos. of some of these trees in early spring, which I am having reproduced in a forthcoming work on natural history, specially to illustrate the beauty of ivy-covered trees, and to show that it is fallacious to condemn the "parasite"—if such it can be called—for its liking for growing on trees. I trust that Selbornians in various parts of the country will do what they can to have ivy-covered trees preserved, as during this season of the year nothing is more captivating than the luxuriant ivy clusters around old and *healthy*-looking trees.

St. Albans, Herts, W. PERCIVAL WESTELL, M.B.O.U.
February 15, 1901.

Mr. Daubeny's quotations on the whole appear to confirm my view. The Rev. Mr. Millard is, like others, "convinced against their will, of the same opinion still." I would only remark on his argument that "little or much, the ivy must rob the tree of a portion of its sustenance," that the roots of a tree occupy some *hundreds* of square feet, the ivy, the roots of which run down perpendicularly, a few *inches* only. It is fed by the water that runs down the trunk, reaching the "tap-root" only, the mainstay of the tree, but not otherwise affecting it. The mischievous error—for error it is—has its origin in the confusion of "cause" and "effect." "Non quia *post* hoc, ergo *propter* hoc."

I cut down five trees lately, all for some years dead. Three were covered with ivy, two bare. There was not the slightest difference in their measurements. A tree dies, having ivy running up it, and being dead, the ivy under the influence of light and air, now for the first time admitted, grows luxuriantly and overtops the branches. A casual observer at once attributes the death of the tree to the pernicious action of the ivy. Mites in a cheese, maggots in a carcase, are not the *cause* but the *result* of decay.

March 11, 1891. GEORGE ROOPER.

A Shropshire vicar writes:—"I admire ivy on trees immensely, and have always encouraged it; but about four years ago a horse-chestnut died at our gate—a tree with a diameter of 2½ feet—and a variegated sycamore (2 feet in diameter) of the same age is about dying. I tried to save its life by having all the ivy stripped off, but it has never recovered much and still looks very unhappy, and the branches are dying off. Both are unquestionably killed by the pressure of the ivy all massing around them. At the same time I cut through with a saw the ivy on two other sycamores, but the ivy continues to flourish nearly as well as before. I did it to save their lives! My experience is that it does not injure oak. There are numbers of oak trees in the neighbourhood covered with it, and apparently uninjured. I am much interested in the ivy question, as I like the ivy on trees so much, and it does so well here."

Twining Plants.—I should be obliged for information respecting two opposite habits I have observed among plants which climb by twining without tendrils, one class turning from left to right, the other in the contrary direction. In the former class I have noticed jasmin, convolvulus and runner beans; in the latter, hop, woodbine, bryony and climbing buckwheat. Is any reason known for this variation, and has a distinctive name been assigned to either habit?

Dartmouth. OBSERVER.

[The fact of some species being dextrorse and others sinistrorse is well known. It is connected with the direction in which the shoot circumnutates and is constant in each species. Careful observations might, perhaps, lead to the discovery of left-handed varieties of the dextrorse species, and *vice-versâ*, as we have in the shells of mollusks. To say it is connected with the spiral or circumnutatory growth of a centric organ is not, of course, to explain the "why," but only the "how."—ED. *N.N.*]

SELBORNE SOCIETY NOTICES.

Annual Meeting.—Attention is again called to the notice in NATURE NOTES for April, with reference to members willing to assist with the loan of exhibits.

Members requiring tickets should apply *at once* to the local Hon. Sec., or in

the case of members unattached to branches, to the Secretary, Selborne Society, 20, Hanover Square, W. A stamped and addressed envelope (not small) must accompany each application.

Council Meetings.—The next meetings of the Council will take place on Tuesdays, May 7 and 21, and June 4, at 5.30 p.m., at 20, Hanover Square, W.

New Members.—The following new members have joined:—W. J. Clarke, Esq., Chatham; Miss Jessie Turner, Kensington; H. C. Lee, Esq., B.A., Bromley; Miss Hillier, St. Albans; Rev. Canon Blunt, Burghclere; Lionel E. Adams, Esq., B.A., Stafford; Mrs. Broomhead-Colton-Fox and Miss Broomhead-Colton-Fox, Wales Court.

Donations and Subscriptions.—The Council beg to acknowledge with thanks the receipt of the following donations:—W. J. Clarke, Esq., 10s.; J. J. Williams, Esq., 10s.; and the following subscriptions over 5s.:—Rev. Arthur L. Hussey, £1 1s.; Sir Jas. Colquhoun, Bart., 10s.; Arthur Cottam, Esq., 10s.; Matthew Bigge, Esq., 10s.; W. E. Milne-Redhead, Esq., 7s. 6d.; Hon. Walter Rothschild, £1 1s.; O. V. Aplin, Esq., F.L.S., 10s.; Lady Farrer, £1; Frederick Enock, Esq., F.L.S., F.E.S., 10s.; Mrs. Broomhead-Colton-Fox, 10s.; Miss Broomhead-Colton-Fox, 10s.

Selborne Saturday Afternoons.

Saturday, March 23, **Natural History Museum.**—A few members met in the Botanical Department and Mr. V. H. Blackman, F.L.S., of the Department, kindly gave a demonstration on xerophytic and cryptogamic plants.

FIELD CLUB RAMBLES.

May 4.—Ramble round Southfleet. Leave Holborn Viaduct, 2.25. St. Paul's, 2.28. Take cheap return tickets to Southfleet, return fare 1s. 6d. Meet at Southfleet Station at 3.30. The times of the train should be verified from the May time table of the L.C.D.R. Guide, Mr. A. B. Wilkinson.

Saturday, May 11.—Ramble from St. Mary's Cray to Petts Wood, &c. Guide, Mr. Mühlberg. Trains leave Victoria (L.C.D.R.) 2.42, and St. Paul's, 2.40. Take single tickets to St. Mary Cray, 1s. 0½d.

Saturday, May 18.—Coulsdon to Chipstead. Take return tickets to Coulsdon. Cannon Street, 2.17; London Bridge (S.E.R.), 2.20; East Croydon, 2.43; Coulsdon, 2.57. Return from Coulsdon, 8.4; arriving at London Bridge, 8.35, and Charing Cross, 8.51. Conductor, Mr. E. A. Martin, F.G.S.

Saturday, May 25.—No ramble.

Saturday, June 1.—Meet at West Drayton Station on the arrival of the train leaving Paddington at 2.30, and Ealing Broadway at 2.44. The ramble will be primarily devoted to the collection of land and freshwater mollusca. Tea will be taken at Uxbridge, and, if possible, an exhibition of shells will be arranged and some remarks made upon them by Mr. Wilfred Mark Webb, F.L.S., who will conduct the excursion.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 16, Mount Ararat Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, A. J. WESTERN, Esq., 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 138. JUNE, 1901. Vol. XII.

ANNUAL MEETING AND CONVERSAZIONE.

THE Society's Annual Meeting and Conversazione was held on Thursday evening, May 16, at 20, Hanover Square, W., Lord Avebury, the President, in the chair.

Letters of regret at their inability to be present had been received from Lord Farrer, Earl Percy, Sir Edward Grey and the Right Hon. James Bryce.

The following Report of the Council was then taken as read.

The Council are aware of the fact that in presenting their Fifteenth Annual Report there can be little that is new to members who are conversant with the work of the Society as recorded in its Magazine.

NATURE NOTES, under the able editorship of Prof. Boulger, F.L.S., F.G.S., continues its useful career of instruction in matters Selbornian, and has rendered good service by detecting and exposing attempts to destroy or injure places of natural beauty or interest.

In the hope of extending the Society's sphere of usefulness, the Council invited certain Natural History Societies in the country, chiefly in places where the Society had no branch, to nominate one of their members as Honorary Local Corresponding Secretary to the Selborne Society, and to the Council's overture there has been a fair response.

The threatened construction of a Laboratory in the Old Deer Park, Richmond, has been abandoned in favour of another site.

The beautiful hill near Croydon, known as Croham Hurst, with an area of eighty acres of woodland and heath, has, it is hoped, been saved from destruction through the energies of a Committee under the secretaryship of Mr. Ed. A. Martin, F.G.S., initiated by the Croydon Branch of the Society. After two years' agitation the Croydon County Council decided to purchase the remainder of the Hurst for £15,000, and it now only remains for the Charity Commissioners to sanction the sale.

The Ancient Whitgift Hospital Buildings at Croydon, being threatened with demolition, the same local branch has been instrumental in forming, with Mr. W. Whitaker, B.A., F.R.S., as Chairman, and Dr. J. M. Hobson, B.Sc., as Hon. Secretary and Treasurer, a Croydon Antiquities Protection Committee, and it is

hoped that the efforts made to preserve this interesting structure will prove successful.

Other branches have an excellent example of the way in which opportunities that have fallen to the lot of the Croydon Branch have been utilised. The Council feel sure that there are many matters, which, though perhaps of smaller moment, are yet entirely Selbornian, in which the country branches may interest themselves with beneficial effect—such as the threatened closing of public footpaths, so-called restoration of churches and other ancient buildings, destruction of local animals and plants, and the many and various ways of spoiling local scenery.

It is with regret that the Council have to record the closing of the Barmouth Branch, which under the Hon. Secretaryship of Dr. Hughes did much useful work, but collapsed after his retirement from that office.

An addition has been made to the list of Junior Branches at Haileybury College.

Owing to pressure of other work on behalf of the Society, Mrs. Percy Myles has resigned the office of Librarian and Mr. A. E. Malaher has been elected to succeed her.

The Council also announce with regret the resignation by Mr. A. J. Western of the post of Secretary, which he has held for twelve years, and they have had pleasure in appointing Mr. R. Marshman Wattson as his successor.

FIELD CLUB.—The Council have received a favourable Report of the proceedings of the Field Club during last year from the able Organising Secretary, Mrs. Percy Myles, who was assisted in her duties by Mr. A. B. Wilkinson, and a full Report of these Meetings has already been published in the Magazine. In all twenty-one rambles were taken to places of interest and attraction under the experienced direction of members of the Society, and the attendance at them was regarded as satisfactory.

SELBORNE SATURDAY AFTERNOONS. — Eight Selborne Winter Saturday Afternoons have been held during the Season just ended as against five for the previous winter. Four visits were made to the Natural History Museum, when members were under the guidance, respectively, of Professor Boulger, F.L.S., F.G.S., Mr. V. H. Blackman, Dr. A. Smith Woodward, and Mr. L. Fletcher, F.R.S., who, in their different departments, afforded to the visitors great intellectual pleasure. The other four visits were:—

(1) To Lambeth Palace, whence the members repaired to the church adjoining, where Professor Boulger delivered an instructive address on the tomb of the Tradescant family.

(2) To St. Paul's Cathedral, when Minor Canon Gilbertson was kind enough to act as guide.

(3) To St. Bartholomew's the Great, Smithfield, where the Rector, the Rev. Sir Borradaile Savory, Bart., placed his services and his knowledge of the ancient edifice at the Selbornians' disposal.

(4) To the Temple Church, and Middle and Inner Temple Halls, on which occasion Mr. F. Downing ably discharged the duties of guide.

The eight meetings were attended by 226 members and friends, giving an average of twenty-eight per meeting, so that the numbers shown entirely justified the institution of these Winter Saturday Afternoons.

The Selborne Society has been put to no expense in connection with these meetings, and the thanks of all participating in them are due to Mrs. Percy Myles for having made the necessary arrangements.

Mr. Otter then made the financial statement (here annexed).

Commenting on the balance-sheet Mr. Otter observed that it showed—and there were indications of it elsewhere—that there was some decline in the branches of the Society, which he regarded as rather a serious matter. While subscriptions from people who did not belong to the branches had increased, the receipts from the branches had decreased. The policy of having branches, therefore, would seem not to have been wholly suc-

FINANCIAL STATEMENT IN RESPECT OF THE YEAR ENDED ON DECEMBER 31, 1900.

Receipts.

	£	s.	d.
To Subscriptions	157	9	1
,, Donations	24	7	1
,, Sale of NATURE NOTES to Branches	65	13	7
,, Percentage on Receipts of Branches	13	6	9
,, Profit on Lecture	0	9	6
£261	6	0	

Expenditure.

	£	s.	d.
By Rent...	15	15	0
,, Secretary	25	0	0
,, Postage	7	10	4
,, Stationery	1	3	0
,, Editor of NATURE NOTES (Postage and Stationery)	1	11	0
,, Annual General Meeting	11	8	0
,, Grant to Field Club	1	1	0
,, Subscription to Thames Preservation League ..	1	1	0
,, Subscription to South Eastern Union of Scientific Societies	0	5	0
,, Messrs. Godfrey and McCall	1	0	0
,, Messrs. Bale, Sons and Danielsson, Ltd. (NATURE NOTES)	175	6	10
,, Messrs. Bale, Sons and Danielsson (Printing) ...	8	6	6
,, Miscellaneous...	3	4	5½
Balance	8	13	10½
£261	6	0	

*** Since this account was closed a sum of £17 7s., which properly belongs to it, has been received.

DEFICIT ACCOUNT.

	£	s.	d.
To Surplus on Account for 1900	8	13	10½
Balance	32	18	2
£41	12	0½	

	£	s.	d.
By Deficit as shown in Account for 1899	37	1	2½
,, Error in estimate of assets in Account for 1899 ...	3	0	0
,, Bad debts previously credited	1	10	10
£41	12	0½	

cessful, although there were some eminent exceptions, which made the fact more vexing. To have well organised branches supplied one of the strongest foundations for a permanent sort of Society such as the Selborne. Other societies which were comparable to it had definite purposes, as for example, The Commons Preservation Society, and the Footpaths Preservation Society. But the purposes of the Selborne Society were so comprehensive that it was all the more necessary their locally established branches should work together for the common objects of the Society. The purposes of the Selborne Society could not be defined by rules, but were matters of practice. There were several official objects; but probably, what the Society desired more than anything else was by precept and example to induce a certain attitude of mind towards objects of Nature. It might perhaps be a definition of the attitude to say that the Selborne Society believed nothing to be common or unclean. They did not wish to preserve plants or animals simply because something in them was attractive to one's particular taste or fancy, but they desired to preserve and take an interest in everything pertaining to natural history. A Society like that therefore required, more than any other, local associations where members could meet together and study together. He therefore urged the branches to give a more satisfactory support to the finances of the Society, and thereby become not so much branches as roots.

Lord Avebury, in moving the adoption of the Report, referred to the loss the Society had sustained in the late Secretary, Mr. Western, to whose efforts so much was due. As regards the main objects for which the Society was founded, he thought they might, on the whole, fairly congratulate themselves that good work had been accomplished. As regards the Wild Birds Preservation Acts, while many of the County Councils—particularly the London County Council—had carried out the Acts in a wise and energetic manner, there were others whom they would be glad to see taking a somewhat more lively interest in the preservation of the wild birds of our country. In London, certainly, there had been a remarkable change, and everybody who had watched the wood pigeons in the parks and the beautiful gulls flying up and down the Thames, must have had brought home to him how much more pleasure and interest there was in watching animals when they were living than in killing them and preventing them from providing us with further interest. But in spite of the Wild Birds Preservation Acts, there was still a great deal of ruthless destruction going on, which was very difficult to prevent, and which every now and then was brought out prominently by some side light, as when, a short time ago, a man brought an action against another to recover £2 for which he had sold ten dozen linnets—most of which he (Lord Avebury) was told, died—and the dealer in question was said to buy generally about a hundred dozen song birds every week during

the season. It was really dreadful to think of the destruction which was going on in those ways. He was told the other day a story by a gentleman staying at a country house. The host lamented to him that so many birds were disappearing, particularly, he said, the hawks and the owls. "When I was young," he complained, "there used to be a number of them about here. Now there are hardly any left and I cannot make out what has become of them." "I can tell you," said the guest; "they are all nailed up round your gamekeeper's cottage." Perhaps, however, this was not the case now so much as a few years ago. In the preservation of plants, also, some good had been done, but still it was sad to see how the wild flowers, particularly the primroses and cowslips, were disappearing in the neighbourhood of London. Of course it was pleasant to see how much the children enjoyed them—and grown-up persons too—but he wished they would, while enjoying them, remember that if they took them all and left none for seed, the time was not far distant when none would be left for anyone to enjoy. While he admitted that the local authorities were doing good work in the matter of preserving wild birds, he wished they would not be quite so tidy about our country roads and lanes. A certain amount of luxuriance and wildness in this direction was a great beauty, but there was a tendency on the part of persons in authority to trim the hedges and replace old footpaths by gravelled walks, with kerbstones laid on either side, to which he very much objected, both as a ratepayer and as a lover of Nature. There had been several very interesting works on natural history published during the past year. First and foremost he desired to mention the beautiful edition of "White's Selborne" itself. While he agreed that if anyone wished to read the book straight through, it was better to have it in the form in which it finally appeared, yet there was much interest in seeing the process by which White arrived at his conclusions. He wished also just to refer to one passage in Maeterlinck's book on the Bee. The author there expressed the opinion—which was also that of Victor Hugo and many other distinguished writers — that "all things in Nature are sad when our eyes rest too closely upon them, and thus it ever shall be so long as we know not her secret, and even whether secret truly there be." He did not think that was the spirit of Gilbert White or of the Selborne Society. If the contemplation of Nature was to make them sad, he, for one, should prefer to look somewhere else. But if they looked at Nature in the right way he really did not see why it should have that effect. The mistake seemed to be in considering the effect upon any particular individual instead of the effect upon the race. Nature did not trouble herself about the individual, but her great object—and her wise object, too—was the greatest happiness of the greatest number. If once they realised that, then he thought they would find no need

to complain of the sadness of Nature. Maeterlinck took the case of the life of the drones, who having lived a short, bright, happy existence in the sunshine, were, at the approach of winter, ruthlessly massacred. That was a fact, but at the same time there was no reason to believe that the drones had any anticipation of the misfortune that awaited them, and there was every reason to hope that their death was almost painless. At any rate it was sudden, and they were spared the suffering of the long, cold winter, and next year there was another crop of drones to lead an equally happy and bright, if short, life. Therefore if the object was that the drones should be happy and enjoy themselves, this arrangement was probably the best that could be devised. Huxley once said that Nature gave everything to "her darling the strongest." That again he thought a mistake. He used the word strongest not merely to imply strength of muscle, but also of brain, digestion, and, in human beings, the strength of character, because, if Nature gave too much, and there was not the character to utilise it properly, the result would be to weaken the person, make him fat, lazy, dyspeptic, and not so happy as a more energetic existence would render him. If Nature did too much for any being, and that being did not do what he could for himself, he gradually sank in the scale of existence, and Nature, instead of benefiting him, had done him disservice. At any rate if the view of Maeterlinck and other writers—that Nature was sad—were the correct one, they were all making a mistake and were wrong in the belief—though he thought they would continue in that belief—that the study of Nature contributed most largely to make life bright and happy and useful.

The Earl of Stamford seconded the adoption of the Report. Supplementing the remarks of Lord Avebury about works of interest to the Selborne Society, he mentioned the recently-published "Life and Letters of Gilbert White." They might be said to contain the last word that could be said about Gilbert White, a subject that seemed to excite more interest as the years rolled on.

The Report was then adopted.

Mr. Downing proposed and Mr. Otter seconded a vote of thanks to the retiring officers. This was heartily accorded.

The officers for the coming year were then elected as follows:—

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THE RIGHT HON. LORD AVEBURY, D.C.L., F.R.S., &c.

Trustees.

THE RIGHT HON. LORD AVEBURY, D.C.L., F.R.S., &c.
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Basil W. Martin, Esq., F.Z.S.
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A. B. Wilkinson, Esq.

Mr. Bond, the Secretary of the National Trust, then explained to the meeting the proposed acquisition of part of the shores of Derwentwater and appealed for assistance.

Professor Boulger moved and Mr. Martin seconded a vote of thanks to Lord Avebury for presiding. This was cordially voted, and the business part of the proceedings terminated.

In the course of the social gathering that followed, Mr. R. B. Lodge gave a lantern demonstration, entitled "Some Examples of Mimicry, Protective Coloration, and other Special Devices adopted in the Struggle for Existence in Nature."

Microscopic objects were exhibited by Messrs. J. E. Cooper, A. W. Dennis, A. E. Hilton, Ernest Hinton, W. H. Langton, and C. F. Rousselet; botanical specimens by Mr. L. E. Taylor and others; geological ones by Messrs. F. Downing and E. A. Martin; and zoological ones by Messrs. E. A. Adams, Basil Martin and J. E. Whiting, and by Dr. J. W. Williams. Mrs. Brightwen sent living specimens of the sacred scarab of Egypt, and Mr. F. Primrose Stevenson lent a leg of a French partridge, captured in Suffolk, around which, in consequence of a wound, a huge mass measuring $7\frac{1}{2}$ in. in circumference and weighing $6\frac{3}{4}$ oz., had gradually accumulated. The late Mr. Darwin, who examined it, regarded it as a singular confirmation of his theory as to the transportation of the seeds of plants by adherence to the beaks and feet of birds. Writing at the time he said: "It is remarkable, considering that the ball is three years old, that eighty-two plants came up from it, twelve being Monocotyledons and seventy Dicotyledons, consisting of at least five different plants, perhaps many more." Pictures were also lent by Mrs. Philip Hensley, Miss Flora Gordon and Miss Stannard.

SELBORNIANA.

Wild Birds Protection Acts, 1894 and 1896.—"W." writes:—

"Is it not time that some endeavour should be made to make these Acts—which were at last secured and passed after great trouble and perseverance on the part of those who first took the matter in hand, and to whom all credit is due—something more than the ridiculous farce they are at present? Everyone interested in birds must know that at no time has 'bird-nesting' in its worst sense, and the destruction of birds for 'specimens,' been more rife than at present. Everyone who has spoken to magistrate, chief constable or police sergeant, has probably met with the same answer, viz., that the police have other duties to perform, and have no time for such work, &c., &c., and no doubt with a considerable amount of truth. But it is equally true that, for obvious reasons, every individual cannot constitute himself a private detective. After returning from a brief visit to the nests known to exist within half a mile of one's residence, and in a state of helpless indignation on finding them all emptied of their contents, two of them at least being within the boundary of one's own garden, it is a matter of some difficulty even to write coherently on the subject. Many newspaper readers must have noted with satisfaction the work which has been done—especially during the last winter in London alone—by our friends, the Society for the Prevention of Cruelty to Animals, through the efforts of their officers, appointed for the purpose, in bringing offenders to justice. In this direction the remedy seems to lie. What has been done by others can surely be done by members of the Selborne and other kindred societies acting in unison, and if it is only a question of money the difficulty ought to be overcome. The writer, at any rate, would glady subscribe to such a fund. A few prosecutions and fines in different localities would be of more effect than all the money now wasted in the printing and posting of bills which nobody heeds, and which have no deterrent effect whatever, for who ever hears of a prosecution under the Wild Birds Protection Acts?"

A Lesson from the Matabeles.—"From time to time the feelings of readers of English papers are harrowed and lacerated by accounts of the destruction of some of the rarest and most beautiful birds, such as the egret, at the very time of their honeymoon, to minister to female vanity in head-gear. It may interest our readers to be told that the Matabele bucks and dandies used to be nearly as bad as these fashionable dames at home, though the birds whose plumage they secured were in no danger of extinction as a race. Many of the South African natives are as vain as peacocks, and literally delighted in former days to strut in borrowed plumes. Thus some of the young bloods amongst the Matabele used to wear a curious tuft of

feathers of the gaudiest and most gorgeous hue possible, such as those of the South African jay. This ornament was not a complete covering for the head, but a knot, or tuft, fastened on one side of the head; and from the central knot dangling and waving feathers protruded, thus producing at first a curious effect on the beholder. The Zulus now are fond of head-gear made of gorgeous-hued feathers, and oftentimes will not part with them even for a considerable sum.

"There is in this weakness alike of the fashionable female world at home and the fashionable native in South Africa that touch of nature which makes the whole world kin."—*Zambesi Mission Record*, April, 1901.

Money in Crows.—A German savant, Herr Rörig, has devoted years to the investigation of the question whether crows are useful or deleterious birds. He has lately published some interesting figures on the subject, based on the examination of the contents of the stomachs of 3,259 carrion crows and 1,500 rooks. He calculated that the grain eaten by the 3,259 carrion crows during a whole year would have a money value of about £900. He estimates that the same number of birds inflict an annual damage of about £1,450 by the destruction of young hares, partridges, &c. That is to say, each crow inflicts damage to the amount altogether of about 14s. annually.

It is more difficult to calculate the service rendered to the farmer by the same birds. This service consists in the destruction of mice and pernicious insects, especially canker-worms and wire-worms.

Herr Rörig estimates that in the process of development the wire-worm will destroy 10 plants, a canker-worm 20, and that a field-mouse, with its progeny, will destroy 1,000. He calculates that the 3,259 crows referred to would benefit the agriculturists to the amount of about £2,500 per annum by devouring injurious insects, &c. According to these estimates, the value of the benefit effected by the carrion crow exceeds the value of the damage it causes by 11d. per annum.

With rooks the difference is still greater, amounting to 4s. 8d. per annum. Herr Rörig says that his figures must not be taken as being exact, but as being approximately true. They serve, however, to show that crows in general are not to be regarded as deleterious birds, and that rooks are extremely useful.

With true German zeal Herr Rörig has instituted most far-reaching inquiries, the results of which lead him to estimate that Germany possesses between $2\frac{1}{4}$ and $2\frac{3}{4}$ million crows of all kinds, and that these birds unwittingly represent to agriculture a capital of from £400,000 to £500,000.—*Morning Leader*.

Variation.—In the *Naturalists' Journal* for June Mr. E. W. Swanton (of the Haslemere Educational Museum) has an article on the variation of *Paris quadrifolia*, to which subject he has paid considerable attention. There are figures of four

remarkable varieties, and the author invites co-operation in tabulating all known forms of this unique monocotyledon, together with the conditions having a tendency to cause such variation.

Lodgings at Selborne.—In case any Selbornians or others are thinking of paying a visit to Selborne, Miss Martelli would be very glad to recommend the rooms at Miss Phillips', Myrtle Cottage, Selborne, Alton, Hampshire, as a very comfortable place to stay at, and with a pleasant view of the Hanger.

NATIONAL POSSESSION AT THE ENGLISH LAKES.

LL Selbornians will be glad to hear that the Committee of the National Trust for the preservation of places of historic interest or natural beauty have determined to make an effort to secure for posterity, safe from the woodcutters' axe and the speculative builder, a part of the most beautiful fore-shore on the western side of Derwentwater. Visitors to the English Lakes know how entirely their shores are in the hands of private owners, and though we have much to be thankful for in the preservation of woodland and quiet meadow by reason of this ownership, there can be no question that the boating upon many of these lakes loses much of its charm by reason of the fact that except at public landing-places, and these are few and far between, there is no chance of pushing a boat ashore without the possibility of trespass.

Derwentwater is no exception to this rule, and the Committee of the National Trust have been public-spirited enough to do what they can to obtain an added pleasure for holiday seekers in that part by attempting to secure a mile of the western shore which has just come into the market. It is a great opportunity, for these properties do not often change hands. In this instance, if the public come to the rescue, they will prevent the possibility of the woodlands being cut down, or of villas being built to the injury of the natural scenery, and to the disturbance of its dignified quietude.

The estate in question lies on a fair slope between the public road that passes along Cat Bels and the shore. It reaches from Otter Biele Bay, near Hawes End, on the north, to Brandlehowe at the south.

One of the charms of the estate is that it lies adjacent to an unenclosed common, and those who land upon it will be able to pass uninterruptedly to the summit of Cat Bels. The scenes from the sloping meadows adjacent to Otter Biele Bay, of St. Herbert's Island, the Skiddaw and Blencathra group

to the north-east, and the Borrowdale and Glaramara hills to the south-east, are very beautiful. This was one of Robert Southey's favourite view points; and few men who have lived in the Keswick Vale had sounder judgment as to what constituted a beautiful view than he.

Doubtless the sum, £7,000, which it will be necessary to raise seems a large one, but there are £2,000 worth of wood growing upon the estate, and when one considers that there is only one Derwentwater, and that the property may be looked upon as having more than agricultural value, the sum which the owner asks for his 108 acres does not seem exorbitant; but of the necessary £7,000 about £1,500 were raised before the appeal was made to the public. Meetings are to be held, by the kindness of the Lord Mayor, both in Manchester and in Liverpool in June. Six months are allowed us for our effort to raise the the money. It would be a great matter if all readers of this Magazine would do their best to obtain contributions, which would be gratefully acknowledged by the Secretary of the National Trust, 1, Great College Street, Westminster; by Sir Robert Hunter, Reform Club, Pall Mall, W.; by Miss Octavia Hill, 190, Marylebone Road, N.W.; or by myself, Hon. Secretary of the National Trust, Canon Rawnsley, Crosthwaite Vicarage, Keswick.

NOTES ON LONDON BIRDS IN 1900.

BIRDS seem rather fond of surprising human beings by turning up in unexpected places. On January 4, when I arrived at my office in the morning, I was delighted at hearing the song of a robin from a neighbouring roof although there was no garden near. A more appropriate occasion could not have been found for the performance, as it was my birthday,—a day upon which I make a point of "taking things easy" and enjoying life. This robin stayed for two or three days in the same place, greeting me each morning with a song. His departure was a source of regret; for it is a great thing to be brightly greeted—even by an animal.

Early on January 8, a man was "thinning" the ducks in the Serpentine, presumably by direction of the authorities, but I observed that in his zeal for sport he had secured a coot for his bag. On the 14th, a flock of redwings was feeding in Kensington Gardens between Lancaster Gate and the Round Pond. On February 3, snow was lying in Hyde Park and flocks of larks, as is usual in hard weather, were to be seen passing overhead from the north and east; but, in spite of the cold, woodpigeons were "cooing" as ardently as if the leaves were on the trees. I observed a very exhausted fieldfare in Hyde Park on the 10th of this month. About this date starlings collected every evening

in enormous numbers to roost in the garden of Buckingham Palace: the noise they made chattering and squabbling before they settled down for the night was tremendous. I heard a blackbird singing in Hyde Park on February 26—the first of the year; though a friend told me she had heard one singing on Campden Hill on the previous day.

The movements of London rooks are very hard to understand. In 1899 I do not believe that any rooks nested in Connaught Square, though I frequently saw the birds on the trees where they had previously nested. But in 1900 there were, I think, thirteen nests in Connaught Square, of which twelve seemed to be complete, and when I carefully inspected the place on April 29, I came to the conclusion that eight were tenanted. But at the end of March there were also two nests—one an old one patched up—by the lodge of the Prince of Wales' Gate on the south side of Hyde Park, and on April 3 I saw a bird sitting on the new and smaller nest. It is recorded by Mr. H. Russell in the *Zoologist* (1900, p. 519) how another nest was begun shortly afterwards and how by the end of April the first nest had been demolished and a colony with nine nests had appeared in the trees in the yard of Kingston House on the opposite side of Kensington Road. I rather think that some of the Kingston House colony came from Connaught Square, but it is impossible to say so for certain.

A late Easter took me out of town just at the right time for getting the first sight of the summer migrants, and it was not until April 19—the day upon which so many great men have died—that I heard the willow wren singing in Kensington Gardens. Close by the willow wren were two beautiful male wheatears. There was a swallow flying over the Serpentine on April 25. Two pairs of crows built nests in the Gardens last summer, and in July I saw a party of five, four of these being, I believe, young birds hatched in one of these nests. On May 2 I noticed a greater whitethroat in Kensington Gardens, on the 7th a reed warbler, and on the 10th a whinchat. Spotted flycatchers had arrived on May 14: there were a good many of these birds in London throughout the summer—many more than usual. A pair of moorhens built a nest under the spouts of the fountain in one of the small ornamental basins close to the Bayswater Road, but the ducks interfered with them a good deal and I do not think that any eggs were hatched there. I saw nothing of particular interest during June. On July 24 I first noticed the male vapourer moth flying about in Hyde Park. It was a very hot day. The next morning was even hotter, and the fish in the Serpentine seemed to be close to the surface. Early in the morning I observed them jumping out of the water as the shadow of a wood pigeon, which was flying overhead, passed over them. I watched this happening two or three times, and on each occasion, as birds flew across, the course of their shadows over the surface of the water was marked by jumping fish.

During the first week of August, swifts, no doubt preparing for departure, were to be seen flying over the Serpentine in large numbers. On the evening of the 10th the weather, which had been very damp and raw, suddenly changed, and on the next morning all the swifts had departed. The willow-wren was singing in Kensington Gardens on August 17 and again on the 24th; while on September 12 I heard the chiff-chaff, this being the only occasion upon which I have heard the song of this bird in a London Park in autumn.

Some black-headed gulls appear to have taken to spending the night on the Serpentine, at any rate they have been staying later than they used to do. In previous years they all seemed to leave the Park regularly at sunset, flying away in a south-easterly direction. But last autumn at the end of November I often walked along the Serpentine after dark when returning home from my work and could usually hear the gulls quite clearly, although it was too dark to see them. I rarely come across anything of ornithological interest in London in December, but on the 3rd of this month I heard a missel-thrush singing loudly in Kensington Gardens close to the Magazine.

February 28, 1901. A. HOLTE MACPHERSON.

BUTTERFLIES FOR LONDON.

SOME of the public prints have lately advocated the introduction of butterflies into the parks and other open spaces in London, and have even gone so far as to say the authorities might take the matter in hand. That five or six kinds of our common and most beautiful English butterflies could be established in such places seems possible; and the experiment, which would be an interesting one, might easily be tried.

The following are to be especially recommended, as their food plant is the nettle, which keeps most creatures at a distance, and grows anywhere: the Peacock (*Vanessa Io*), the Lesser Tortoiseshell (*Vanessa Urticæ*), and the Red Admiral (*Vanessa Atalanta*). The *Vanessidæ* and some few others live through the winter, and those that survive the ordeal of hybernation pair early in the spring and then lay their eggs.

The most effective way, therefore, of introducing these insects into any locality is to catch and lay them down in the spring. Half a dozen boys armed with nets and duly initiated in the mysteries of sugaring, to which subtle art of the entomologist these butterflies are a certain prey, could easily collect a hundred or two in a few days. The captives, being hardy, might be conveyed by post in suitable boxes without serious risk.

An attempt might also be made with the Large Tortoiseshell (*V. Polychloros*), which as a caterpillar feeds upon the Wych

Elm; but the ordeal for the caterpillar and chrysalis amongst legions of sparrows would be great.

The Painted Lady (*Cynthia Cardui*) might also be tried. This, like the above-mentioned, hybernates, and its larva feeds on thistles, preferring those that grow singly in open park-like ground; but unfortunately on its food plant it is only too easily seen.

As, however, by this time these butterflies have laid their eggs, some larvæ might be laid down; and to any London Selbornian willing to undertake the task of placing them in suitable spots, I will endeavour to forward a small supply.

To ensure success some trouble should be taken in selecting the feeding ground. On a patch of nettles at the side of the field in front of my house the larvæ of *Vanessidæ* are to be found by the thousand almost every year. This is an exposed spot and away from the fatal drip of trees. Close to this, nettles grow most luxuriantly on a long bank, but the butterflies never resort to them, as they are shut out by trees from all but the early morning sun. I have never noticed birds attack these larvæ, but whether the London sparrow be more venturesome in this respect than his country cousin, time may possibly prove. Methinks the foes awaiting the caterpillars on a nettle bed will be human rather than passerene.

Some of the Hair-streaks and Blues are also worth consideration.

In the centre of Bury St. Edmunds, where of course there are many sparrows, there is an elm tree on which the White W. Hairstreak (*Thecla W-Album*) is to be seen every year. Where it occurs its numbers are often great.

The Holly Blue (*P. Argiolus*), so-called because its larva feeds on the flowers of the holly, may also be suggested. I do not think this insect would stand a journey by post, but it has the recommendation of being double brooded.

As to the Common Blue (*P. Alexis*), there would be great danger of its larva being trampled to death, or eaten with its food plant.

In attempting to introduce Lepidoptera into London, there is a probability that they would be comparatively free from the attacks of their greatest foes, ichneumon flies, whose absence is to be expected from places where their natural prey does not exist.

A very small ichneumon fly lives by the dozen as a grub in a butterfly's egg. Sixty or seventy of a larger kind make their living off a caterpillar, while a third species lays numerous eggs in a chrysalis.

London Selbornians sometimes tell us in a delightful way through the pages of NATURE NOTES of the creatures still left to them for observation, and would be the first to rejoice in adding a few more butterflies to their scanty list.

EDMUND THOS. DAUBENY.

Market Weston, Thetford.
May, 1901.

A RAMBLE IN EPPING FOREST.

EPPING FOREST in April has no connection with the Epping forest of the Bank Holiday and the school treat. Its grassy glades are unsullied by the paper bags of the cheap-tripper, the merry-go-rounds are motionless. We feel almost like intruders as we thread its winding paths under the budding hornbeams and hawthorns. It is an effort, perhaps, to go so far for one short afternoon; but it is well worth it—worth the hideous railway journey from Liverpool Street, through sordid streets and evil-smelling factories—to breathe that pure, delicious air, to tread on emerald daisy-sprinkled grass, and to have one's ears gladdened with song of lark and nightingale. There had been a hailstorm that morning, and the hailstones still lay in white heaps in the shadow of the bushes; but the keen wind which stirs the blackthorn to bloom is tempered here, and we need not hurry our footsteps. Indeed we must walk leisurely, or we should miss the countless flowers scattered at our feet—the little white chickweed, the wild strawberry, the delicate wood-sorrel and wood-anemone, the polished celandine, and the dog-violet. The cuckoo calls ceaselessly, and the wood-pigeon mourns gently over our heads. Insect life is scarce, only an occasional bumble bee and a few small pendent caterpillars are to be seen. We long to stay another hour, and reluctantly leave the wood; but when the train carries us once more through bricks and mortar, we can close our eyes and still wander in imagination down leafy paths, and hear the cuckoo above the traffic's roar.

April 27, 1901. M. C. B.

REVIEWS AND EXCHANGES.

The Life and Letters of Gilbert White of Selborne. By his great-grand-nephew, Rashleigh Holt-White. 2 vols. John Murray. Price 32s.

THE steady sale of the many lovingly-executed editions of "The Natural History of Selborne" evinces a cult of the eighteenth-century naturalist that has certainly long demanded an authoritative biography. His senior living representative, one of our Vice-Presidents, has now given to the world what is at the least an invaluable approximation to a definitive biography. Illustrated with ten excellent portraits of members of the family—every Selbornian knows that there is no portrait of Gilbert White himself in existence—and with many other interesting views and relics, with a pedigree, and, above all, with a long series of letters from and to the naturalist never before published, Mr. Holt-White's work certainly enables us to form a far more accurate and complete mental portrait of his illustrious ancestor than was ever before possible. Every Selbornian will, therefore, be anxious to read it, and we can assure them that there is in it a most fascinating treat in store for them. At the same time, just as we have sometimes urged that modern interest in White of Selborne demands a complete edition of all his extant works, so we cannot but regret that the modesty of the editor of these "Letters" has made him stop short of a full biography. Every one does

not possess Professor Bell's edition of the "Natural History," so that matter which appears in the introductory portion of that work, especially White's Oxford diaries, should have been reproduced here; and we should have liked a bibliography and a fuller collection of "appreciations" by the many naturalists who are indebted to Gilbert White.

The Natural History of Selborne. By Gilbert White. Edited by Charles Weekes. J. M. Dent and Co. Temple Classics. Price 1s. 6d. cloth, 2s. leather.

Mr. Weekes's name is unknown to us as that of a naturalist; but, in spite of some trifling slips, the four pages of "Editorial Appendix" and the thirty-two pages of Notes which he has added to this dainty pocket edition of our beloved classic seem to us to be models of editorial modesty and helpfulness. A charming view at Selborne forms the frontispiece; but the publishers might well have omitted the worn blocks from Bewick's "Birds."

Disease in Plants. By Professor H. Marshall Ward, Sc.D., F.R.S. Macmillan and Co. Price 7s. 6d.

Everything that Professor Marshall Ward gives us is sure to be accurate, novel and suggestive. In addition to the ripe fruit of his own researches, he lays before us the latest results of Continental and American workers; and yet we are not satisfied. We want a comprehensive work on vegetable pathology, and he gives us a series of little books. This volume does not contain 300 pages of text, and its type is large, and yet, out of this, 80 pages are occupied by an account—excellent in itself—of vegetable physiology, of the plant in health, whilst 30 more, on "Life and Death," are not very closely connected with the main subject. It is true that the title should perhaps suffice to warn us that plant-diseases will not be very fully described; but much of the book, we confess, appears to us disappointingly like an introductory course of lectures. In themselves, we hasten to add, many of the chapters are excellent, as for instance, the cogent defence of physiology as against mere organic analysis, and especially that entitled "The Biology of Soil," which every student of agriculture or horticulture should read. In spite of an occasional slightly Germanic obscurity of style, passage after passage was marked for quotation; but space only permits the following:—

"The foundation of a knowledge of disease in plants . . . centres in the understanding of the pathology of living cells.

"If a suitable mass of living cells is neatly cut with a sharp razor the first perceptible change is one of colour: the white 'flesh' of a potato or an apple, for instance, turns brown as the air enters the cut cells, and the microscope shows that this browning affects cell-walls and contents alike. The cut cells also die forthwith; and the oxygen of the air combining with some of the constituents forms the brown colouring matter which soaks into the cell-walls. The uninjured cells below then grow longer, pushing up the dead *débris*, and divide across by walls parallel to the plane of the wound, and so form series of tabular cells with thin walls, which also soon turn brown and die, the cell-walls meanwhile undergoing changes which convert them into cork. The living cells deeper down are now shut off from the outer world by a skin of several layers, of cork-cells, which prevent the further free access of air or moisture. During the period of active cell-division which initiates the cork, the temperature of the growing cells rises: a sort of fever (wound-fever) is induced, evidently owing to the active respiration of the growing cells."

Professor Marshall Ward has added to the value of his book by giving references to the literature of the subject; but we hope some day to see that more comprehensive treatise from his pen.

Received:—*Knowledge*, *Science Gossip*, *The Naturalist*, *The Naturalists' Journal*, *The Irish Naturalist*, *The Animals' Friend*, *Our Animal Friends*, *The Animal World*, *Humanity*, and *The Agricultural Economist* for May.

NATURAL HISTORY NOTES AND QUERIES.

Author Wanted.—I shall be much obliged if NATURE NOTES can tell me where the enclosed lines come from. I cannot find out the authorship. (A line or two was once quoted in the text of *N.N.*)—Yours truly,

M. H.

"Think, every morning when the sun peeps through
The dim leaf-latticed windows of the grove,
How jubilant the happy birds renew
Their old melodious madrigals of love!
And when you think of this, remember, too,
'Tis always morning somewhere, and above
The awakening Continents, from shore to shore,
Somewhere, the birds are singing evermore."

Polecat.—Referring to Mr. Rawlins's note on this subject in last month's NATURE NOTES it may be of interest to record that I have in my possesion a very fine male polecat from Montgomeryshire, measuring twenty-two inches in total length, which was shot by a keeper on September 14, 1896.

Though not yet extinct, there can be no doubt that this creature is becoming much more restricted in its distribution in Great Britain, being still found in parts of Wales, the Lake District and in Scotland.

Elm House, Hampstead. BASIL W. MARTIN.

A correspondent enquires in the May number of NATURE NOTES as to the occurrence of the polecat. Speaking for this part of Berkshire, I believe from the enquiries I have made that it is now nearly extinct. One was seen about ten or twelve years ago in a neighbouring parish, persistently chasing a rabbit in full view of some labourers, who ceased their work to watch the chase and result. The polecat eventually killed the rabbit, which was picked up by the men, and sold to a passing carrier. This is the last I can hear of. Years ago it was common enough in the neighbourhood. An old keeper once told me he succeeded in trapping no less than seven in one place.

Fyfield, near Abingdon. W. H. WARNER.

Mole.—Yesterday afternoon (May 5) I noticed a mole on my lawn amusing itself in rather a queer way. It was working away with its snout and shovel-like fore-paws in the usual determined fashion, apparently trying to burrow. Of this, however, I was by no means certain, as it had made eight or ten small holes, all nearly alike, in various parts of the lawn, but at no great depth below the surface. Venturing to touch its velvet coat, it began running about in an aimless sort of way, and at length came straight towards me as if eager to attack. It at last ran into a border, and hid itself among the plants. I fancy it must have been grubbing in the turf for worms and other creatures. A fine cock blackbird which haunts the lawn and shrubs had two days previously been making somewhat similar holes in the path close by—the object in this case being sufficiently obvious. Though I have often seen moles running about, I was not previously aware that they sought for food above ground during the day, though Bell in his "British Quadrupeds" says they do so at night in the month of June. The correspondent who asks on p. 24 whether moles breed in the spring-time of the year, is informed that young moles have been found from early in April to August, according to the above-named author.

Fyfield, near Abingdon. W. H. WARNER.

Moles and Weasels.—Since I wrote the note on p. 71 three other weasels have been taken in mole traps. It appears that this occurred in the Rev. Gilbert White's time, since he mentions it in a letter dated September 2, 1774. I had a misfortune with the one I wrote of on p. 71. After keeping it several days in the wire rat-trap it forced through the wires and climbed to the bird-cages and killed four bullfinches by forcing itself in through the wires. One bird it also pulled through the wires and carried it away, where I found the weasel lying snugly by it. Like foxes, weasels are not satisfied with killing what they require, and usually kill a litter of young rabbits and only eat a portion. The weasel managed to make its escape, so that it is uncertain where it is by this time.

Astwood Bank. J. HIAM.

Wild Dog.—On page 224 (NATURE NOTES, No. 132) I see the Dingo of Australia is stated to be "the only true wild dog in the world." Is this correct? What then is the wild dog of South Africa?

Sir J. Willoughby in his book "East Africa and its Big Game," writes, "Wild dog. Two large packs were twice seen . . . ."

F. V. Kirby mentions them in both his books, "In the Haunts of Wild Game" (Fauna of the Kahlamba-Libombo), and "Sport in East Central Africa."

I have seen a pack of wild dogs in Matabeleland hunting two full-grown water-buck. The latter came close to our waggon and then divided, one going either side, and standing a little distance off as if for protection, the dogs being afraid to approach so near.

I have near me as I write a pair of Kudu (koodoo) horns, four feet four inches round the curve, three feet tip to base, the owner of which was killed by wild dogs, and the same pack also killed a donkey.

A friend of mine was attacked by a pack north of the Gwaai River and shot several, he also shot one here (seventy miles south of Zambesi River), all of them greyish with brown stripes and bushy tails with white tips.

N. Rhodesia. G.

Lists of Summer Migrants.—May I be allowed to thank the many Selbornians who have so very kindly responded to my request for lists of arrivals of summer migrants in their respective districts. One of the most interesting received comes from "The Wakes," Selborne.

The lists are most interesting and instructive and I am now busily engaged compiling the same for publication. This means some thousands of entries, but when the same are complete, I venture to say that the interest attaching to the various records will be very great.

When ready, copies can be obtained from me on receipt of six stamps.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.

May 2, 1901.

Nightjar.—The habits of this bird here (Zambesi Valley) seem to be similar to those described by your correspondents in Nos. 131, 132, and 133 of NATURE NOTES. The middle toes have a saw-like edge, a peculiarity shared also I believe by the home nightjar. I shot one with a single feather in each wing 24 in. long. This only occurs here and in Matabeleland during the mating season. Does it occur at all in Europe? G.

Partridge Eggs.—I got four, of a dirty grey colour, and a very ugly shape, flat enough at the broad end to stand on a rough surface. The shell is very thick. Are these characteristics different from the European species?

N. Rhodesia. G.

Korhasu.—Forty miles north of the Zambesi River I got two eggs of a korhasu; they are perfectly round—a bluish grey with blotches of sandy brown. Is there any book published which would enable me to trace them? They were laid on the bare ground, but fortunately our string of carriers walked quite close to them (frightening the old birds away before I saw it) without destroying the eggs. I returned about sundown hoping to see the old bird, but she did not appear to have returned. I shall be much obliged if your readers can give me any information *re* the above. This afternoon (March 7, 1901), whilst walking through some long grass (6 ft. high), I found four nests, three of them made alike, more or less sewn between two stalks of grass, with small square entrances, but the eggs (three, three, six, one) were all different. The fourth nest was hung on to the grass in the same way, but the entrance was a very small circular hole low down and the whole structure much more closely built. The eggs of course were left, as I did not see any of the birds. The grass was full of small birds of every colour, one in particular of a very bright scarlet, one bright gold, one pink, one mauve, one black and white, &c., &c. Since then I have found other nests (three) identical with the above, but the eggs in every case different, one plain blue, one slate with brown spots, the others different shades of blue with black, brown, or grey spots.

N. Rhodesia, South Africa. G.

More about Midges.—I have long supposed, though I have not been able to get conclusive evidence, that the midges, which suddenly appear in parties during the winter months, and as quickly vanish, must be hybernators. Mr. Rooper's discovery is conclusive: no doubt they shelter themselves in clumps of evergreens, thick hedges, and other convenient places, whence they emerge for an aërial excursion, "weather permitting." But why call them *pests?* A few of them are slightly injurious to the blossoms and foliage of some trees or shrubs, the majority are quite harmless. I do not believe they possess the stinging power of gnats, though they have been accused of "biting." Their dances are remarkable, because they revolve round, and also at the same moment gradually shift their position. As weather prophets I hardly think they are to be trusted, but their coming forth after rain probably indicates a temporary improvement.

J. R. S. CLIFFORD.

A Scriptural Flower-bed.—We have a round flower-bed in our churchyard with a clump of hollies in the centre, which I am hoping to fill by degrees with plants bearing Scriptural names. Of course we have Star of Bethlehem, Jacob's ladder, Aaron's rod (mullein), Solomon's seal, and St. John's-wort. Can your readers give me any further suggestions? I think I must admit the hyssop and Jerusalem cowslip. If the Rose of Sharon is a cistus it will find our soil rather heavy, and the Virgin Mary's thistle might spread and become a nuisance. The Trinity flower (Trillium) is rather difficult to please, the Judas tree is too large, and the Calvary clover too small.

Milton, Lymington. J. E. KELSALL.

Mirage.—There can be no doubt that the very interesting account given in the *Daily Mail* of April 16, of the city of Bristol being seen in Alaska, is most probably correct. I can give a parallel case, though in the opposite direction. A few years ago I had been to pay a visit to my farm on the south of Dartmoor. It was late summer and there had been much rain. Consequently in the evening at about eight or nine o'clock the layer of air near the ground was cold, whilst the upper layer was hot. As I walked from Lee Mill Bridge to Ivy Bridge I had a very clear view of the Aurora Borealis. This simply means that a view of the currents of magnetic electricity passing northwards and entering the earth above Labrador was projected through hot air over cold, so that I could see them at a distance of thousands of miles. Those of your readers who take an interest in this subject may refer to NATURE NOTES for September last year, where they will see an illustrated article of mine giving some remarkable effects of mirage, with an explanation. We are beginning to understand these things.

Montreux, April 28, 1901. GILES A. DAUBENY.

SELBORNE SOCIETY NOTICES.

AT the Council Meeting held on May 21 the following officers were elected for the ensuing year:—Chairman of Committee, Mr. George Avenell; Treasurer, Mr. J. L. Otter; Secretary, Mr. R. Marshman Wattson.

Council Meetings.—The next meetings of the Council will take place on Tuesdays, June 4 and 18, and July 2, at 5.30 p.m., at 20, Hanover Square, W.

New Members.—The following new members have joined:—Mrs. G. Dymond and Miss M. E. Dymond, Langton Matravers; Geo. E. Alexander, Esq., Stockwell; Miss Helen Wight, Woodberry Down; Chas. S. Parsons, Esq., Highgate.

Donations and Subscriptions.—The Council begs to acknowledge with thanks the receipt of the following donations:—Mrs. Clarkson, 2s. 6d.; Geo. Avenell, Esq., £1 1s.; J. F. H. Gillard, Esq., F.I.C., 2s. 6d.; and the following subscriptions over 5s.:—Mrs. Wolryche-Whitmore, 10s.; Mrs. Philip Hensley, 7s. 6d.; Dudley Buxton, Esq., M.D., D.Sc., 10s.; G. B. Milne-Redhead, Esq., M.A., 10s.; W. Warde Fowler, Esq., M.A., 10s.; F. Alfred Currey, Esq., and Mrs. Currey, £3 3s.; Geo. H. Edwards, Esq., 10s. 6d.; Haileybury Natural Science Society (Junior Branch), 15s.; Rev. G. Huddart, 10s. 6d.

FIELD CLUB RAMBLES.

Saturday, June 1.—Meet at West Drayton Station on the arrival of the train leaving Paddington at 2.30, and Ealing Broadway at 2.44. The ramble will be

primarily devoted to the collection of land and freshwater mollusca. Tea will be taken at Uxbridge, and, if possible, an exhibition of shells will be arranged and some remarks made upon them by Mr. Wilfred Mark Webb, F.L.S., who will conduct the excursion.

June 8.—Weybridge. Leave Waterloo main line 2.29. Take return tickets, 2s. 10d. Dr. Willson and Miss Ward will meet members at Weybridge Station. Ramble on St. George's Hill. Tea at Swiss Cottage, 5.30.

June 15.—Enfield, Winchmore Hill, and Southgate. Take single tickets to Enfield G.N.R. Train leaves Moorgate Street 2.27, King's Cross, 2.38, Finsbury Park, 2.46. Guide, Mr. Carpenter.

June 22.—Train from Cannon Street, S.E.R., 2.30. Take single tickets to Orpington, 1s. Walk to Farnborough, Keston, Holwood Park and Hayes, returning by train from Hayes, 1s. 0½d. Guide, Mr. A. B. Wilkinson.

June 29.—Oxshott, to join the North London Natural History Society. Book to Oxshott, cheap return 1s. 7d. Morning party leave Waterloo by the 9.35 train. Guide, Mr. L. B. Prout, 246, Richmond Road, Dalston. Afternoon party leave Waterloo by the 2.22 train. Guide, Mr. C. Nicholson, 202, Evering Road, N. Tea at Oxshott at 5.30. Further information from either of the guides, to whom probable visitors are recommended to send in their names not later than June 27.

July 6.—Not yet arranged; full particulars will be given in the July magazine.

Selborne Society Badges.—The attention of members is called to the recognised badge of the Society. They are tastefully designed in pale and dark blue and silver, the outlines being as shown in the accompanying illustration. They are especially useful as a means of identification between Selbornians at branch meetings, or at country Field Club Rambles.

It is intended to make a further issue in the two forms mentioned below, providing there are sufficient applications. Members who have not already applied should write at once to the Secretary. If re-issued the prices will be—Brooch, 3s.; pin, 1s. 6d.

ANSWERS TO CORRESPONDENTS.

Richard R. V., writer of "In and about a Warwickshire Parish." Kindly send the Editor your address, which he has mislaid.

Summer Migrants.—As we do not think the separate publication of isolated dates of inland observations useful, we have handed those we have received to Mr. W. Percival Westell, who is tabulating them with a view to publication.

W.—(1). *Staphylea pinnata.* (2). *Lonicera Xylosteum.*

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 16, Mount Ararat Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, Mr. R. MARSHMAN WATTSON, 20, Hanover Square, W.

Nature Notes:
The Selborne Society's Magazine.

No. 139. JULY, 1901. Vol. XII.

SELBORNIANA.

The View from Richmond Hill.—Attention has been directed to the danger that threatens one of the most lovely spots in the world, the view from Richmond Hill, Surrey. It is that the low-lying wooded meadow-land on the opposite or Middlesex side of the river, extending from Twickenham Eyot to Richmond Bridge and amounting to about 150 acres, may be sold for building purposes. This is not a question which concerns Twickenham, Richmond, Middlesex, Surrey or London exclusively. It is a matter of national interest. No doubt, the sum requisite to preserve this beauty spot will be large; but it is one which should be readily contributed to from many sources, and should in that manner be easily met.

A Raid upon the Wild Flowers of the New Forest.—The Technical Instruction Committee of the Essex County Council have invited applications from teachers in Essex for attendance at a ten-days holiday course on Nature-study in the New Forest during August, and have issued a detailed programme of the course by Mr. David Houston, F.L.S., copies of which have been sent to us. This programme has been severely criticised in the *Times* by Professor L. C. Miall, F.R.S., and by Professor Meldola, F.R.S., a member of the Committee, the main gravamen of their opposition being that the student-teachers have their attention specially directed to the rare plants of the Forest, and are to form collections for drying and identification. There is much in Mr. Houston's programme that we most heartily approve, as when he proposes to give his pupils "an insight into the way in which plants grow, especially in their relations with their environment—the influence of external conditions. . . . . upon their form, ... and the

influence of one organism upon another." It is also only fair to add that in a conspicuous place in the programme appears the caution, "Members of the party will of course refrain from uprooting rare or scarce specimens." At the same time we cannot but think that Nature-study might be as well studied in Essex as in the New Forest; that collecting of any kind is no essential part of the study; that rare plants are no better than common ones for the study of botany; that it is, to say the least, most indiscreet to direct the attention of a large class of beginners to the precise localities of such rarities, especially by a printed circular; and that, even if no harm results in the present case, a dangerous precedent has been set to other teaching bodies. The Committee would be wise, we think, to cancel the programme in its present form. The following amusing verses have appeared on the subject in the *Westminster Gazette*:—

In Technical Studies an ebb time and flood is,
So Essex has started—though late in the day—
On the pathway of learning. Her students are yearning
To cut all our wild flowers, and turn them to hay.

They've here led their classes—professors in glasses,
Established in lodgings, they threaten to stay,
Lest some plant that rare is, become mere *vulgaris*,
The flowers of the forest they'll clear clean away.

Ah, loud now our wail is for thee, *æstivalis*
Spiranthes. No blossom unfolds with the day.
Near Lyndhurst they spied thee; they cut thee, they dried thee.
The flowers of the forest are all stolen away!

Thy flowers, *Calycinum*, they pluck them and twine 'em
With damp *Humifusum*. They found them near Sway.
The bright *Pyrus malus* next springtime must fail us.
The flowers of the forest are all stolen away!

Wherever there grows a *Lastrea spinulosa*
Filix-mas, *dilatata*—Next Bank Holiday
Essex 'Enry and 'Arriet shall cut and shall carry it.
The flowers of the forest are all stolen away!

Badger-Lifting.—A Mr. Lush having written to *The Standard* boasting of his prowess in killing eight or ten badgers per annum, the following excellent article appeared in that paper:—

A correspondent in Gloucestershire sends us an account, in a letter which we print elsewhere, of the great success which he and his friends have lately met with in the pursuit of the badger. Gloucestershire is one of the English Counties in which these animals have hitherto contrived to maintain themselves in considerable numbers—but that is not the fault of our correspondent and his friends. In all the Western Counties—Cornwall, Devon, and Somerset—they are comparatively plentiful, and in Wales and along the Welsh border they hold their own. Standish Park, in Gloucestershire, is not very far from the Forest of Dean on the Welsh frontier; and the forest must afford the badgers much excellent cover. They were to be found forty years ago in Stow Wood, near Oxford. In the West of Ireland they are reported to be still abundant. The badger, says Mr. Pease, in his little monograph published three years ago, "has made a wonderful struggle for existence." But he believes him to be doomed. The gamekeepers' edict has gone forth against him; he is classed as "vermin," and is disappearing with the polecat, the marten, the wild cat, the nobler kind of

hawks, and other wild creatures, furred and feathered, formerly denizens of our English woodlands. The badger, it should be remembered, is an exceedingly retiring animal. He lives in a kind of underground fortress, from which it is difficult to dislodge him, and which he never leaves till it is dusk, when he sets out on his nightly prowl. He is chased by enthusiastic sportsmen, as the fox used to be in former days, on his return home. When his trail is once found by a little pack of good terriers, a capital run may be had, and if a sack is placed at the mouth of his castle, he is generally taken alive. Digging him out or forcing him to bolt with dogs is a much more arduous task, as he fights furiously, and is rarely conquered till he has left his mark upon some of his assailants. But what becomes of the badgers when they are taken? What was done with the sixteen animals whose fate is recorded by Mr. Lush? They were surely not all destroyed; and what is the good of taking them only to keep them in cages, or to turn them loose again? If they were caught and killed as vermin, we should protest emphatically against such wholesale slaughter of one of the few really wild species still existing in these Islands. Possibly they kill a fox cub now and then, and make away with a good many rabbits; but they do not do enough damage to be seriously injurious to sport, or to justify a war of extermination. It is also the case that the badger is as fond of honey as *ursa major*, and as no stings can penetrate his hide, he can feast on the nests of wild bees, wasps, and hornets, whose grubs he thinks delicious, with perfect impunity. Occasionally this sweet tooth of his will lure him into gardens, where he does not hesitate to upset the bee hives and swallow the contents. But is the poor badger to be driven out of the country for such peccadilloes as these, and our woods deprived of one of their most ancient and interesting inhabitants? With all respect to the gamekeepers, we hope not.

Butterflies for the London Parks.—L. writes: "As I noticed an article in your issue for June on the subject of butterflies in the London parks by Mr. E. T. Daubeny, it may interest some of your readers to know what is actually being done. The question of attempting to naturalise butterflies in London was first brought before the London County Council in November last. The chairman took the matter up warmly and, at his request, a scheme was drawn up for the consideration of the Parks Committee. The scheme was approved, and the Council determined to try the experiment this year in Battersea Park. If it is successful we may hope that it may be extended to other parks under the London County Council, and possibly also to the Royal parks. The Council have now completed a greenhouse for use as a breeding house, which has been constructed under the advice of the well-known naturalist, Mr. W. Furneaux, who has kindly undertaken to supply the necessary larvæ. The three butterflies with which the experiment will be first tried are the Red Admiral, the Peacock, and the Small Tortoise Shell. All these species feed on the common nettle, and therefore the question of food plants is comparatively easy. If Mr. Daubeny, or any other of your readers, wish to assist in this excellent project they can do so by sending larvæ, or, still better, pupæ of these three butterflies in as large numbers as possible to W. Furneaux, Esq., 48, Ommaney Road, New Cross, S.E., advising him beforehand of their intention. Several thousands of pupæ and larvæ are now in the breeding house, chiefly of *Vanessa Urticæ*. It is much to be hoped that a really good supply of *V. Io* and *V. Atalanta* will follow in due season."

SOME BIRDS OF BIRMINGHAM.

RESIDENTS of Birmingham have for the most part very little idea of the number of birds that either inhabit the various open spaces in the city boundaries or visit them on migration. In the course of fifteen years of observation over one hundred species have been seen, some of of which are exceedingly rare.

The localities in which they have been observed are : various gardens in Edgbaston, the Reservoir, Edgbaston Park, Harborne Reservoir, and the Botanical Gardens. Of these the Botanical Gardens and Edgbaston Park are still well populated by birds. The reservoir is now too over-run by holiday makers to be attractive as a breeding haunt, though twelve years ago several species bred there, and, except as a halting place for migratory species in the autumn and early spring, is comparatively deserted.

The gardens of Edgbaston generally are well supplied with bird life, and in one of them, Widdrington, fifty species of birds have been found breeding.

The spotted flycatcher appears to be one of the commonest birds that are seen. In most gardens of any size there is at least a pair. They may be seen sitting on tennis netting or posts, and occasionally darting through the air after insects, returning to the same spot like a boomerang. The common sparrow has apparently caught this trick of darting after flies, but his efforts are, to put it mildly, hardly so elegant. These birds breed regularly in many gardens, when they are not disturbed, making their nests in ivy or creepers, and occasionally in the fork of a tree. The eggs are similar in colour to those of the robin, but much smaller.

The chiff-chaff warbler is also a regular visitor in the spring, and his "chiff-chaff" may be heard along the less frequented roads. He breeds regularly at the Botanical Gardens and Edgbaston Park. The nest, which is domed, is placed on a bank and fairly well concealed. It is made of grass and lined with feathers, usually black. The eggs are about the size of a pea, and are white with dark red or purple spots.

The willow warbler, or willow wren, is also a regular summer visitor to the Botanical Gardens and Edgbaston Park, and occurs in some private gardens as well. His full rich song is sometimes mistaken by those who do not know it for that of the nightingale.

This latter bird is regularly heard in Edgbaston, and breeds in the park. During the springs of 1896—1899 one was heard singing near St. James's Church, in the gardens between St. James's Road and Pakenham Road, about a mile, that is to say, from Stephenson Place.

The reed and sedge warblers frequent Edgbaston Park,

breeding there regularly, and the former also nests at the Botanical Gardens. The song of these birds is very sweet and full, and from the fact that the reed warbler sings at night it is often mistaken for that of the nightingale, although the songs are quite distinct. Its nest is built among reeds, well above the water, and is composed of grasses cunningly woven among the stems of the reeds to support and strengthen it. The eggs are of a faint greenish tint, with blotches of dark greenish brown, which are thickest at the thicker end of the egg.

The sedge warbler, a much smaller bird than the last, nests in low bushes near water, or in brambles well tangled with grass.

The lesser and greater white-throats breed at Edgbaston Park and the Botanical Gardens, and the latter also at Harborne Reservoir. These birds are very shy, their song being low and sweet. They nest among nettles or ground cover of that sort.

A rarer bird than those already mentioned is the blackcap, which is occasionally seen at the Botanical Gardens and Edgbaston Park. He can be easily recognised from his splendid song and from his colouring, which is darker than that of the other warblers, and he also has, as his name implies, a black head. He is very shy and difficult to approach, and his nest is, luckily, very difficult to find, being closely concealed in thick brambles or undergrowth of that sort well mixed with grass. It has been noticed that the blackcap is more easily driven to desert its nest than almost any other bird.

The wood-warbler is another rare and shy bird that used to breed at Edgbaston Park. A nest was once found at the foot of a tree about one hundred yards from Edgbaston Park Road.

The goldcrest also frequents not only the park and Botanical Gardens, but also many private gardens as well, and is seen practically all the year round. It breeds at the Botanical Gardens. The nest is a deep cup of moss, somewhat similar to that of the chaffinch, and is usually built at the end of a fir branch, just out of reach. The eggs are very small, and are white with dark spots, or clouded with greyish brown.

The kingfisher is fairly numerous at Edgbaston Park, and since the Alpine Garden was first made has also appeared at the Botanical Gardens, but does not apparently breed there, although there is no doubt that he does so at the Park.

Thanks to the efforts of the Selborne and kindred Societies, this splendid bird is becoming, like the badger, considerably less rare, and in certain districts is common. The nest is very difficult to find, and is placed at the end of a hole in a bank near the water.

The green woodpecker is found at Edgbaston Park, and used some fifteen years ago to be seen at the reservoir. This brilliant bird, with his green body and red cap, is no songster. His harsh cry is heard mostly before rain, though apparently he

is not restricted in any way by the weather. It has been noticed that he does not cry out in the evening. The nest is placed in a hole in a tree cut out for the purpose. The eggs are of a transparent whiteness, about the size of those of the blackbird.

A collared pratincule, a very rare visitor to the British Isles, was noticed in the winter of 1890, in front of No. 40, Harborne Road, then in the occupation of the late Mr. D. W. Crompton. It was seen by several people, members of his family, who were looking out of the window, and at once identified it from a specimen in his collection. The number of times that this bird has visited the British Isles is so small that it can almost be counted on the fingers.

A pair of carrion crows has for many years bred in the trees at the reservoir or in the fields near, and another pair breeds in Edgbaston Park. In one clutch taken from these none of the eggs were of the normal colour, which resembles that of the rook's egg, but were blue, like starlings', or spotted like thrushes'.

Another bird which is scarce in this locality is the woodcock. One was observed in the winter of 1899-1900, in the bed of the stream at the foot of Richmond Hill. A pair of these birds have, it is believed, bred at Edgbaston Park. At any rate they have been seen there all the year round.

Of the wagtails all the British species have bred here except the grey-headed, which has very rarely bred in England at all. It has, however, been observed here.

Five kinds of tits are constant residents in Birmingham, the great, blue, coal, marsh and long-tailed varieties. The first four inhabit many gardens in Edgbaston, the last breed at Edgbaston Park and the fields round Harborne Reservoir. The long-eared owl was an inhabitant of Edgbaston Park a few years ago, and has once been seen at the Botanical Gardens. This bird, though not rare in many districts, is certainly seldom found in the limits of a city like Birmingham. It has a curious habit when excited or alarmed of jerking its ears up and down, and added to the fact that the ears or horns are very noticeable, this habit makes the bird easy to identify. Unlike the tawny and white owls, which also frequent the park, its habits are diurnal, and it has no objection to coming out into the open.

More interesting perhaps are the great crested grebes which have for years been settled at Edgbaston Pool. Their handsome plumage and stately appearance, their boldness in approaching and the suddenness with which they disappear under water attract attention to them. It is a pretty sight to see the old bird followed by her brood sail across the pool and suddenly disappear without leaving a sign. These birds are able to swim with just their heads above the water, and it is curious to see them gradually submerge themselves, till finally where there was a grebe swimming there is nothing to be seen.

The nest is a heap of sedges and weeds about the size of a band-box anchored to a reed or bunch of sedges. The eggs,

which are white, are as often as not covered by water, and apparently do not suffer. When the bird leaves the nest she carefully conceals the eggs with bits of weed and sedge, so that it is possible to look at the nest without noticing what it is. This custom is common to all the grebes.

A pair of dabchicks, or lesser grebes, once caused great interest and amusement at the reservoir, not so much by their own movements as by those of their would-be captor. A man in a boat had evidently set his heart on securing them, and to that end he assiduously rowed about after them, invariably finding when he reached the place where he had seen them that they had dived, and were now regarding him from somewhere well astern. A great northern diver has also been seen at the reservoir. He stayed there for about a fortnight, much to the bewilderment of a local sportsman who vainly tried to get a shot at the goose, as he called it. Every time he fired it dived at the flash, and after remaining under water several minutes it turned up in quite a different part of the pool.

The pochard has been known to breed at Edgbaston Pool, and is believed to do so still; and on one occasion a pair of common tern nested there, and the old bird was observed feeding her young. This took place about thirty years ago, and is the only occasion known on which the common tern has nested by inland waters, although the Arctic tern does so.

Many of the waders have been observed at Edgbaston Reservoir, the rarest of which, the buff-breasted sandpiper, was seen there on August 29, 1889, and on April 19, 1892. This bird, which is a very rare visitor to the British Isles, was among a flock of other sandpipers, and fed close up to the observer, who was lying down. The proper home of this bird is in North and South America, and it has never been known to breed in Europe.

The little stint has also been observed on several occasions. This delicate little bird is the least of the sandpipers, and is a circumpolar bird, only visiting these islands on migration.

The dotterel, ring dotterel, whimbrel, curlew sandpiper, dunlin, grey and golden plovers, have also been seen at the reservoir on migration; the dunlin in large flocks, but the others more rarely, in fact, the grey plover and curlew sandpiper have only been seen there once or twice.

Most of these birds are fairly easy of approach, or rather, if the observer lies down and keeps still, the birds will often feed close to him.

It is exceedingly interesting to watch a flock of these graceful birds darting here and there among the gravel and sand seeking their food.

It is not pretended that this is a complete record of the birds of Birmingham, but perhaps those mentioned may be admitted to be at least among the most interesting.

J. A. P. Crompton.

St. James's Road, Edgbaston.

MY PET PIGEON.

I DO not think many people know what a clever bird a pigeon is, and how constant in its affection. When a pigeon pairs it is for life, and the cock bird is most devoted and attentive to his mate. He builds the nest, and if she does not like it she pulls it to pieces and he builds it again. Then when the time for sitting comes, the cock shares the burden of hatching the eggs. Of the first pair of pigeons I had, the cock always sat in the daytime and left his wife free to enjoy the fresh air and sunshine. Then when night came she took her place upon the nest. When the eggs are hatched, both birds take an equal share in feeding their young; it is a very busy time, for the young birds are very voracious. Pigeons, unlike most birds, do not open their bills for the parents to put the food in, but they put their bills into the old birds' bills, and then the old bird fills the young crop from the contents of its own crop.

I once had a pigeon which lived to be twenty years old, and I do not know how many more years he might have lived had he not met with an accident. He was a very funny bird, and was master of all the pigeons: he had a great many wives, as his mates seemed always to come to some unfortunate end: he never mourned long for their loss, but used to set off almost at once to a neighbouring farm, where a great number of pigeons were kept, and remain there until he had paired, and then he would return home with his new wife. I do not think he was ever away longer than three days. It was a most curious thing that it did not matter how many pigeons we had, he would never choose one of them for his mate. To each of his wives in turn he seemed most devoted, sitting beside her for hours in the sun, pruning his feathers and kissing her.

I once had a pet pigeon which was a marvel of tameness. The way I came to have it was through a quarrel of the parent birds, who in their struggles with each other kicked their little one out of the nest. It fell a distance of about six feet on to some stones, and as it was only a day or two old and was not in the least fledged, it was a wonder it was not killed. My old nurse found it nearly dead, as it was chilled by lying on the cold stones, and was also injured by the fall. She brought it to me and we warmed it by the fire, and as it slowly began to recover we determined to try and bring it up. It was a very difficult undertaking as the little creature was so young, and its beak so tender that you could not force it open without hurting it. The only way to bring up young pigeons if taken from the nest when just hatched, seems to be to let them feed out of your mouth. For many days I used to feed my little pet in this way until he was able to eat by himself. He grew into a most amusing quaint bird, and he had all sorts of funny little ways,

but he was never able to fly or even to walk without limping, as both his leg and his wing had been injured in his fall. He had a bench in the kitchen where he always used to sleep at night, or rest in the day time if he felt inclined. He never allowed anything to be put down on his bench, and if by chance anything was put there he would show his displeasure by marching up and down with his feathers all roughed up, and cooing very loudly until the thing was removed.

When the weather was warm, Birdie, as my pigeon was called, used to live chiefly in our large old-fashioned garden, and when I used to call him, as I often did, he used to come as fast as his little legs could carry him. Sometimes he used to come and look for me, and it was the funniest thing to see him looking first in one room and then in the other with his head on one side and the wisest look in his eye until he spied me, and then he would march up and jump on my foot and begin to prune his feathers. It was my custom to kiss Birdie and talk to him if I went into the kitchen when he was there, and if by any chance I forgot to notice him, he used to get very angry and walk up and down his bench, bowing his head and cooing in a very loud voice, and he would never be quiet until I went back and kissed him, and then he would seem quite contented and settle himself on his one little red leg and tuck the other up comfortably amongst his feathers and pout himself out in the funniest way. Birdie was extremely jealous, and he never could bear me to pet any other animal but himself. I remember one afternoon Birdie was asleep on his bench with his head tucked under his wing, when I brought another pet into the kitchen and sat down and began to kiss it. I was suddenly roused by hearing a great noise going on, and looking down I saw Birdie in a perfect fury standing at my foot with every feather on end. I could not think at first what could be the matter with him, but guessing it might be jealousy I put the other animal down and picked him up, and immediately he became sweet-tempered and ceased storming.

I had Birdie for two years, and then a strange cat found its way into our garden and killed him, leaving nothing but his two dear little red feet as a proof of his sad fate.

COMPANIONS IN SOLITUDE.

N opening the door of my little cottage and passing through into the garden, the eye is at once arrested by a very fine specimen of the American flowering currant, pink from base to summit with blossom. This bush is of exceptional size, the height being ten feet or thereabouts, and a circumference taken right round the spreading twigs and branches, about four and twenty feet. Almost

opposite, on the right hand side of the track is another of the same species, but which, wedged in as it is between a nut-bush and a golden russet tree, has not expanded to anything like the proportions of its neighbour. It is, however, quite as densely loaded with blossom in proportion to its size, and so also is a still smaller one about ten yards distant. These are the earliest shrubs in the garden, beginning to flower in July, that is in midwinter, long before the leaves appear, blooming right through August, one of our wettest and stormiest months, and now well on in September, are still radiant with countless tubular blossoms, mingled with the pleasing hue of the freshly-opened foliage.

As we might expect, these large stores of easily-obtained nectar being offered at a season when that delectable compound is decidedly scarce, are very fascinating to the insect world: the hum of the early bee, and of such other winged workers as the warm spring sunshine has invigorated into action, may be heard from morn till dewy eve about our honey-scented currant. But it is the nectar-lovers of the bird-world which principally arrest our attention and to whom these early-flowering shrubs prove so irresistibly attractive. The honey-eaters flock in from the tracts of bush which almost surround our little home, and their graceful evolutions may be watched with ease from a window or while standing just outside the door in close proximity to the big bush.

The largest of these feathered friends to visit our garden for the sake of nectar is the yellow-throat (*Ptilotis flavigula*), about the size of a starling, and having the whole of the back, except the head, which is of a slaty tint, coloured a rather pleasing yellowish-green, quite a protective hue among the native foliage in which the bird usually lives. The under surface is of a light slate colour, becoming whitish towards the tail, which has the greenish tint of the back above, and beneath is of a light yellowish appearance; upon the throat appears the large beautiful primrose patch from which both the specific and familiar appellations are derived. The hen-bird also has this mark well-developed, but she appears a good deal smaller than her fine bold mate, who frequently utters a loud full tchoog-tchoog-tchoog-tchoog, while among the blossoms, a note most liquid and musical, which is also heard to advantage in the evening after sunset, just as the birds are retiring to rest in the thick scrub. The note tchoog-tchoog is varied by an occasional loud stately trill, and by these two voices the bird may be easily dentified at a distance, even when hidden in the scrub.

Of the honey-eater family, the next in size to our friend *Ptilotis* is the "Painter" (*Meliornis australasiana*), which has a somewhat similar greenish hue over the back plumage, but in addition has on each wing a dash of golden yellow, which at once distinguishes him. On the throat is a whitish patch, down each side of which curves a black collar-mark, outside which is

a similar curve in white. Over each eye is a very distinct whitish curved line of some length, on account of which it has been proposed to substitute the specific name *supercilliosus* or "eyebrowed," for the present rather vague name *australasiana*. The hen bird has scarcely a trace of gold upon the wings, and the collar-marks with her are much fainter. The "Painter's" ordinary note is a loud cheerful whistle, one of the most inspiriting of bush-sounds, heard early in the morning and late at evening, as well as at frequent intervals during the day. While feeding among the flowers he frequently accents a single note, tchook! of complacency, as well as other more indefinite sounds, "the low love-language of the bird," to which our vowels and consonants could scarce do justice.

Last and smallest of this fascinating group comes the delicate spinebill (*Acanthorhynchus tenuirostris*) as slim and graceful almost as the fairy-swallow, and having the evolutions of a large humming-bird. Often have we stood entranced while watching this bright-hued little phantom poise on quivering wings just in front of one of the racemes of pink blossom, testing each in turn with its delicate bill, fine as a long curved needle, for the drop of precious nectar which there lies hid, and which is whisked out with inconceivable rapidity by the tufted brush-like extremity of the extensive tongue. Having exhausted the raceme, our spinebill will dart into the thick of the bush to frolic with his mate or to drive away an imaginary foe, uttering the while a quick high pip-pip-pip-pip-pip, almost as piercing and needle-like as the bill whence issues the sound.

Our smallest of feathered flower-haunters has a head almost black, some dark brown plumage upon the back, while a large portion of the under surface is a rich chestnut; the throat and upper breast are pure white, save for one remarkable little patch right in the centre, as if a dark thumb had pressed there somewhat heavily.

H. Stuart Dove, F.Z.S..

September 9, 1900. *Table Cape, Tasmania.*

HIGH NOON AT WIMBLEDON.

N this July day the temperature is the highest for 1900, yet let no one say that there are no cool places to be found in suburban London. It is near midday, and we are standing at the southern end of Wimbledon Common, that magnificent heathy waste which stretches three miles, from Coombe to Putney Hill. By this southern margin there is a turfy glade separating the Common from the enclosed pastures of the Warren Farm. The adjacent field contains oaks and a few fruit trees; in the boundary hedge are more oaks and

two or three aged willows. On the heath, a thicket of hawthorn and birch, backed by an immemorial swamp, divides the limits of cultivation from the old fortification known as Cæsar's Camp.

At the end of this shady avenue runs the Beverley Brook, the ancient home of beavers; it takes a straight course through the paradise of Kingston Vale. Beyond the valley rise the wooded uplands of Richmond Park, and on the south-west is "the declyning down of Coombe Park," where, in Leland's time, a Roman villa was discovered.

All round the clearing the gorse pods are crackling as if a miniature salute of guns were being fired. Delicious honeysuckle sends forth its fragrance. The blackberry is in full bloom, and the honey bees from the farm are thereout sucking no small advantage. Already there are signs of late summer; the oak leaves are dull and dark, and by their torn and folded aspect betray the ravages of gall flies and leaf-rollers. Some of the birch leaves have turned to a lemon tint. The sloes are well-formed, but on the wild cherry of the hedgerow little fruit is seen, compensation being, however, afforded by the charm of the delicately scarred ruddy stem. The somewhat uncommon tree or shrub, close by, is the alder buckthorn; it has glossy entire leaves, and its bunches of drupes are tinged with a faint pink. On the close turf are yellow tormentil, purple sandwort, and bird's foot trefoil, sulphur and orange. These are the lowliest members; above them rise the red whorled panicles of the sheep's sorrel dock. High above these, on the edge of the clearing, is a strong breastwork of bracken.

Nature is never silent. The Spanish proverb quaintly says: "He that hath eyes beneath his eyebrows shall learn as long as he lives, and shall see what he shall see." The nature student may well supplement this by the German adage: "One sees only what one knows"—a reminder of the truth that we must know what to look for ere we find it. Listening for birds, the metallic notes of the chiff-chaff are found to predominate, whilst the yellow-hammer, defying heat and the sickness which comes of change of plumage, cries at regular intervals for "a little, little bit of bread and no-oo-oo chee-eese." Occasionally the rusty, creaking song of the corn-bunting breaks in; the sound is like the jingling of a bunch of keys. Then, at a distance, the plaintive *yeck* of the greenfinch keeps up a chime with the scolding *gaa, gaa*, of the whitethroat. To complete the chorus, a pair of stonechats perch on the wire fence, and by ceaseless short journeys from gorse bush to fence and back again, attempt to lure one from their nest: "wi-chic, wi-choc, all gone, all gone." They jerk their bodies and tails tirelessly, but they need not fear. Who is likely to explore the ground in the prickly recesses of that furze bush, and emerge panting, hot, and torn? Sing on, splendid fellow of the black head and chestnut breast!

A different note now is carried across the glade. It is the loud, clear, ringing cry of the green woodpecker, or "rain bird."

Ky-euk, *ky-euk*, is repeated five times from the oak in the pasture. Five times more, and five times yet again. There is an answering *ky-euk* from the coppice. Then the bird of green and crimson crosses the open space, with low, heavy, undulating flight, and disappears at the foot of a tree in the background. What an intense surprise to look round a few minutes later, and find that he is only a yard away, and is about to climb a tree; the magnificent "yaffle" within three feet of the spectator! Remain motionless, this is the chance of a lifetime. The yaffle props himself on the trunk with his tail, clasps the bark with his toes, two backwards and two forwards, and gets ready his straight, wedge-shaped bill. The crimson head and moustache, the olive-green back, and the greens and yellows of his undersides, are beautifully reflected in the sunlight. The eye glitters from the midst of a great black streak which reaches to the bill. Soon the beak will be tapping on the decayed timbers and driving out the frightened insects; the sticky tongue will have work enough to do. Alas, the wary yaffle has seen the onlooker, and with a repetition of the laboured curves he vanishes to another tree. A little stealthy stalking brings him in view again, as he is cautiously working a branch from end to end. This proceeding takes a minute or two, during which the bird is more than half the time hidden. His motions, too, are so agile that they do not permit so careful an examination as before. For some hours the woodpecker breaks out at intervals, *ky-euk*, followed by the tack, tack, tack, on the bark; *ky-euk*, tack, tack, tack. Woodpeckers have now been on the Common two years, and since the bird is one of half-a-dozen species which never migrate, we may hope, in the absence of severe winters, to enjoy his presence for many years to come.

The ditch beneath the oak is matted with ivy-leaved crowfoot, rank persicarias, and gipsywort with pale lilac streaks on its petals. Fifty yards away is the Beverley, now very shallow. On its banks are the red flowers of the great hairy willow herb, the purple tassels of the tufted vetch, and the white umbels of the hemlock. The hemlock has a round, spotted stem and leaves of the colour of verdigris, which, when crushed, emit a mouse-like odour. On a tiny eyot, a clump of celery-leaved, or cursed, crowfoot luxuriates. Two long-tailed tits, the tumblers and tight-rope-dancers of the feathered tribes, go dancing and skipping along the hedge, toying with each other as they go, for the mere pleasure of living. Back in the copse yonder is one of their deep, domed, lichen-coated nests, torn and desecrated—some villain destroyed the structure before the birds could breed. Across the brook, a pair of cole tits have fixed the abode in a hollow stump: this fact is learnt by patiently watching the carrying of worms to the spot. But the cock is extremely suspicious, and will not come boldly out of the foliage. He makes a tremendous noise, *if-hee*, *chee*, *chee*, *chee*, and is so distressed that it is a long time before a glance can be obtained of his

black head and throat, his white cheeks and grey breast. But it is the cole tit, and what is more, in making the discovery, the fact is forced on the mind that the day is very warm and that the journey hither was to find a cooling shade.

WALTER JOHNSON.

Battersea.

REVIEWS AND EXCHANGES.

The Natural History and Antiquities of Selborne. By Gilbert White. Edited, with an Introduction and Notes by L. C. Miall, F.R.S., and W. Warde Fowler, M.A. Methuen and Co. Price 6s.

YET another edition of the immortal classic, and still one for which we cannot say that there was not room. With a plain business-like binding, good paper and clear type, but without illustrations, this edition includes the text of the "Antiquities," hitherto confined to more costly versions, and the fullest index to the work which we remember to have seen, and yet weighs little more than eighteen ounces. There are some statements in the Introduction, such as that White was born at the Wakes, which would not have been made had the editors seen Mr. Holt White's "Life and Letters," and we think that in that case Mr. Warde Fowler might have modified his strictures on White as a pluralist living "in a somewhat indolent comfort." We cannot agree with Professor Miall when (p. xxix.) he deprecates the drawing up of registers, preferring "to learn why birds, insects and flowers observe particular seasons," since assuredly we must have first a wide basis of carefully ascertained facts upon which to generalise. It is, for instance, only when we have such figures as those laboriously compiled by Mr. Preston during twenty-five years at Marlborough that we can apply General Strachey's principle of "day-degrees" to elucidate the physiological requirements of species. Mr. Warde Fowler contributes a valuable critique on White's view of the migration of birds, and, in addition to a judicious selection from the notes of their predecessors, the editors are responsible for some excellent original annotations, especially dealing with dew-ponds, honey-dew, glow-worms, and volcanic dust.

Pilgrimage of the Whitefriars Club to Selborne, Saturday, May 18, 1901. By R. Bowdler Sharpe, F.R.S. Privately Printed.

We hope we are not guilty of any breach of confidence in thus publicly calling attention to an excellent, but privately printed, brochure by that Selbornian enthusiast, Mr. Bowdler Sharpe, to whom the world has been recently indebted for a most sumptuous edition of White's work, and who has himself been carrying on some excavations at Selborne Priory. Though not occupying a dozen pages this pamphlet is an inimitable itinerary chock-full of information. We notice with surprise that the writer quotes without comment White's reference of the church to the time of Henry VII., though no doubt the description of "Peter de Rupibus" as Chancellor "under King Henry I." is merely an uncorrected error of the press.

Field-Path Rambles, Series XX., *West Kent Appendix*, No. 4, *Through the Kentish Hop-lands.* By Walker Miles. Illustrated with Medway Pictures from Photos. by Mr. A. Bedding. R. E. Taylor and Sons. Price 1s. And Series XXII., *Canterbury and Kent Coast Series:* Part I., Ramsgate, Margate, Broadstairs, Sandwich, Canterbury, &c. With 17 illustrations. Same author and publisher. Price 6d.

We need do no more than announce the publication of these two further instalments of this excellently conceived and as excellently executed series. Mr. Bedding's lovely views serve to whet our appetites, while the author furnishes his usual lucid and matter-of-fact itineraries, illustrated in each case by a sketch railway-map. We gladly notice a more liberal allowance of antiquarian notes than in former series, and when we call attention to the facts that one little

volume deals with Ightham Mote and that the other conducts us to Richborough and Sandwich, ramblers will realise that they have here many a treat in store.

Kith and Kin: Poems of Animal Life. Selected by Henry S. Salt. George Bell and Sons. Price 1s. net.

Mr. Salt is at least candid. He begins his Preface by saying: "The editor of a collection of humane poems about animals is under this difficulty—that the material, whether judged by a poetic or a humane standard, is for the most part of a very third-rate order. Where the non-human races are concerned—birds perhaps excepted—the generality of poets, at no time too fastidious in their tastes, seem to be of opinion that anything is good enough for the occasion; with the result that the treatment of animals in verse has been almost as bad as their treatment in actual life." Nevertheless he has got together eighty-five little poems by fifty-six different authors, in a daintily printed and bound pocket volume which humanitarians will be glad to carry into the fields with them.

Our Country's Shells and how to know them: a Guide to the British Mollusca. By W. J. Gordon. With a coloured illustration of every species, by A. Lambert. Simpkin, Marshall, Hamilton, Kent and Co. Price 6s.

The thirty-three coloured plates in this work are a great improvement upon those in the companion volumes of the series; but it is a grave mistake on the part of the publishers to arrange them facing one another with no tissue paper between them. Our copy arrived in a very stuck-together condition. The text is little more than a series of artificial keys to enable the collector to name his specimens, though there is a glossary and a brief synonymy. Dealing almost exclusively with the shell, there is, of course, little or no natural history in the volume; but we have no doubt that it will serve admirably as a collector's manual, and it is certainly remarkably cheap.

Animal Life: a first book of Zoology. By David Starr Jordan, Ph.D., LL.D., and Vernon L. Kellogg, M.S. London, Henry Kimpton. Printed at the Appleton Press, New York. Price 7s. 6d. net.

This work, by two officers of the Leland Stanford Junior University, is one of a series of Twentieth Century Text-books edited by Dr. A. F. Nightingale of Chicago. Its purpose is best explained by the following opening remarks in the Preface. "The authors present this book as an elementary account of animal ecology—that is, of the relations of animals to their surroundings, and of the responsive adapting or fitting of the life of animals to these surroundings. The book treats of animals from the point of view of the observer and student of animal life, who wishes to know why animals are in structure and habits as they are. The beginning student should know that the whole life of animals, that all the variety of animal form and habit, is an expression of the fitness of animals to the varied circumstances and conditions of their living, and that this adapting and fitting of their life to the conditions of living come about inevitably and naturally, and that it can be readily studied and largely understood. The ways and course of this fitting are the greatest facts of life, excepting the fact of life itself. In this kind of study of animals every observation of a fact in animal structure or behaviour leads to a search for the significance, or meaning in the life of the animal, of this fact. The veriest beginner can be, and ought to be, an independent observer and thinker. It is the phase of the study of zoology which appeals most strongly to the beginning student, the phase which treats of the why and how of animal form and habit. At the same time this phase is that to which the attention of the most advanced modern scholars of biology is rightly and chiefly turned." The book itself contains 175 excellent illustrations, and discusses, in a manner necessarily all too brief but eminently suggestive, such topics as the life of Protozoa, colonies, sex, function and structure, embryology, the struggle for existence, adaptations, symbiosis, mimicry, instinct, and distribution.

The Girls' Realm for June contains an illustrated article on "Birds in their little Nests," by Mr. R. Kearton.

Received:—*Report and Transactions of the Ealing Natural Science and Microscopical Society for* 1899-1900; *The Naturalist, The Naturalists' Journal, The Irish Naturalist, Knowledge, Science Gossip, Animal World, Our Animal Friends, Humanity* and *Agricultural Economist* for June.

NATURAL HISTORY NOTES AND QUERIES.

Author Wanted.—Several correspondents have naturally written to point out that the lines quoted by M. H. are from Longfellow's "Birds of Killingworth" in the "Tales of a Wayside Inn."

Is the Water Vole Vegetarian?—No, he is not. I can speak with certainty about that. My dog killed four voles one day. I nailed them to a tree. The next day they were all torn to pieces. Wanting to know what caused the damage, I set a trap just below, four feet from the ground, and caught another vole next morning. I set it again to make certain, with the same result; so they are cannibals as well as fishermen.

Gomshall, Surrey. J. S. NORTON.

Hedgehogs and Goats.—The following anecdote will go some way to explain how the hedgehog-cow "myth" has sprung up and made such headway amongst country-folk. Several years ago a hedgehog used to frequent a faggot-pile at the top of our orchard and was in the habit of coming during the hot weather to drink at a pan of water near the house; in making this journey it had to pass several goats which were kept night and day tethered in various parts of the orchard. One morning our boy, whose daily duty it was to milk the goats before breakfast, came to the house, bringing this hedgehog which he had found nestling close under one of the goats—a nanny. Now I do not for one moment suggest that the hedgehog's intention was to suck the goat, but feel bound to mention that the weather was exceedingly hot at the time and there had been little or no rain for some weeks. Without, therefore, wishing to throw doubt on Mr. Daubeny's remarks, I must say it was at least a curious incident.

Fylton Rectory, Bristol. A. C. MACKIE.

Field Mice.—Mr. F. L. Rawlins, Rhyl, refers to field mice on p. 95. Does he refer to the long-tailed field mouse, or the short-tailed field mouse? The former I presume. If so, the question why these "only sleep one in a bed" does not agree with my experience, either in bee-hives, potato-clamps, or in open fields and gardens, where I have frequently disturbed old and young in families even full grown. When a lad I used to find out in stubble fields by the earth scratched out where to find a nest and mice, and turn them out for the fun of running them down. There is always a back-door or second hole of escape, and the first thing I did was to stop up one and then follow the other to the nest, and when one started stop in the others until the first was killed, or lost, as sometimes happened by seeking moles' runs, which of course could not be followed up.

J. HIAM.

Starlings.—The starlings that live on my premises are in the habit of frequenting the trees nearest to the spot where they nested, so that one pair of birds keep to one side of the house, and another to another, as if guarding their own particular domain. They feed regularly on the lawn, but never go into the kitchen garden, or light on a tree in it, though their liberty to do so is unquestioned. Every morning they are to be heard close to my bedroom windows, and the numbers of birds they imitate is considerable. Indeed, by listening to them, one may almost draw up a list of the birds around. They mimic the green wood-pecker, white owl, rook, jackdaw, pheasant, French partridge, peewit, golden plover, blackbird, missel thrush, moor hen, jay, green linnet, brown linnet, swallow, and some other birds. One spring my daughters told me as they came down to breakfast they had heard a wryneck for the first time. "Where?" I asked. "On the corner of the house by your bedroom." I had heard it too for half an hour, and ascertained that the supposed wryneck was a starling. The imitation was exact. They copy the pigs as they grumble just before their dinner time, and also the cats and sounds about the house.

Starlings are harmless and most useful birds. They perpetually thrust their bills into the ground in search of grubs, caterpillars, beetles and the like, and are a great check on the dreaded wireworm. They dig thousands of the June

Bug or Summer Chafer (*Rhizotrogus solstitialis*) out of the turf on my lawn, a beetle which, though not so formidable a pest as the cockchafer (*Melolontha vulgaris*), does much injury to the roots of grass and other crops, hence its name Rhizotrogus or root-eater, and in some seasons it is very numerous. Sparrows often steal these insects from thrushes, and try the same trick on starlings, but with very little success, as they find them far too sharp. Starlings frequently dispossess thrushes and blackbirds of prey they have just unearthed, and, like many other birds, are much given to taking away food from each other.

Market Weston, Thetford, EDMUND THOS. DAUBENY.
January 7, 1900.

Migration of Rooks.—These birds may be seen flying over Lowestoft from the sea in October and November. They arrive singly or in company, but not in great numbers at a time, perhaps two or so in the course of a morning. No doubt the same occurs all along the coast. They do not keep at any great height, and fly in an unconcerned, easy manner, as if bent on nothing extraordinary. In this locality there were a far greater number of rooks at the end of the year than usually belong to the neighbourhood. Early in the spring these strangers congregated in great numbers on some large fields five miles from here, and after doing considerable damage to the crops, suddenly disappeared.

Market Weston, Thetford, EDMUND THOS. DAUBENY.
May, 1901.

Rooks Planting Fir Cones.—A friend and his wife, both of whom are good observers, have related to me how, when staying in Ross-shire, last autumn they watched rooks planting fir cones in the moor. They buried them in the ground in a systematic and regular manner, and were constantly to be seen flying with a fir cone in their bills. I have never seen these birds engaged in a similar manner. Perhaps some readers of NATURE NOTES may be able to tell us if it a common habit.

Market Weston, Thetford, EDMUND THOS. DAUBENY.
May, 1901.

Rooks.—Is there any truth in the popular belief that, if young rooks are not shot down, the old birds may desert the rookery?

Cheam, Surrey. CHARLES BETHELL.

Jackdaw and Blackbird.—We were sitting in the garden yesterday when we heard several alarm calls from a blackbird. Thinking the cause was probably the appearance of a cat we hastened to the field adjoining. To our astonishment the alarm was caused by a jackdaw, who descended on a poor young blackbird, and taking it up in his claws he carried it off. The other young blackbird flew off after his parents. The incident is not a pleasing "trait" in the jackdaw's character.

Foxton Vicarage, Cambs., A. M. GREENWOOD.
June 8.

The Cornish Chough.—It is but little use to write unless some steps can be taken to protect birds from the marauder. I ask Mr. Hext Harvey to petition the Cornwall County Council to protect this bird, which it is in their power to do.

W. F. COLLIER.

Sad end of Missel Thrush.—About the middle of March a pair of missel thrushes, doubtless the same pair of which mention was made in NATURE NOTES for September, 1900, p. 175, built a nest in a beech tree in my garden. This nest was blown down by one of the high winds then prevailing, and they built a second nest in another beech tree. This one shared the same fate just after completion. I have reason to believe a third one was begun and again blown down. Their next move was to a birch tree not ten yards from the front door of my house. Here a nest was completed, high up in a fork, over thirty feet from the ground, about April 13, and from this time the hen could be seen sitting during the fortnight up to the 26th. The night of the 26th was bright moonlight, and the bird was on the nest when the house was locked up for the night. At this time, some large bird could be heard (but not seen) flying overhead. I am

not sufficiently familiar with the sound to determine whether it was a call, or produced by the wings during flight, though from its regularity it would appear to be the latter. Next morning when looked for at 7.30 the hen had disappeared from the nest, and as she never afterwards returned it was evident that some accident had happened to her. A careful examination of the lower branches failed to afford any evidence of the tree having been climbed, but later in the day a wing feather was found, and a further search on the grass resulted in about a dozen more being picked up. These were all wing or tail feathers, no small ones being found, and all on the south side of the tree, the wind on the night of the 26th being from the north. It seems evident therefore, that she must have met with some violence on the nest, to account for the feathers being blown down. This discovery was a great disappointment, as I had been looking forward to seeing the young ones, and the eggs must have been very nearly hatched. About 5.30 p.m. on the 27th the male bird appeared in the tree, and sat silent and motionless for about five minutes, as though waiting for the appearance of his mate. He then hopped up to the edge of the nest and looked into it, and returning to his former position, waited silently for some time longer, for the mate who would return no more, and finally flew away.

The fate of the female is somewhat mysterious. It is hardly conceivable that any miscreant would shoot her on the nest, or venture to use a gun so near the house, though the act might have been done with a stone or catapult. Is it possible that some bird of prey could have carried her off? Possibly some reader can suggest an explanation. W.

Carrion Crows.—Two days ago I saw a carrion crows' nest which belonged not to two but to three crows. I have been told by a very reliable ornithologist that it is not an uncommon thing for a pair of these pirds to be assisted in the bringing up of their family by a third (presumably barren) bird. Perhaps some of your readers can relate similar observations.

May 10. C. T. Mac L. Plowright.

Martins.—The house martins were very late in arriving in this district this year; even now they do not seem all to have come. The sand-martins, on the other hand, arrived earlier than usual.

King's Lynn, May 10. C. T. Mac L. Plowright.

Chiff-Chaffs.—The note of Mr. Harvey's on page 73 in last issue is very interesting to let us know that chiff-chaffs are only partially migratory in Cornwall. Some years ago I remember seeing one on December 12, but it did not appear to be a healthy specimen as one wing appeared to be a little deformed, and I anticipate that was the cause of it being here. Up to the present time, April 10, I have not heard a chiff-chaff, or any other summer migrant, which is unusually late. As I am writing, a pair of blackbirds keep bringing worms (which they are careful to kill by pecking) to a nest in some laurels a few yards off; it contains only three young instead of the usual five, which I attribute to the very cold weather when the birds were laying about a month since. This is the earliest I ever remember young blackbirds nearly ready to fly.

Astwood Bank, Redditch. J. Hiam.

Late Field-Fares.—On Sunday, the 5th inst., I saw a large flock of these, over fifty, whether on their migratory flight I cannot say, but they flew off in a north-easterly direction, probably for north Europe. It appears strange that these birds of the thrush family should linger here until blackbirds and thrushes have second nests of young. It would be interesting to get definite information as to their habits in Norway and Sweden.

J. Hiam.

Butcher Birds or Red-backed Shrikes.—I have often read of the butcher bird's larder but until to-day never actually came across a case. Hearing an unusual commotion amongst the small birds in the garden I expected as usual that a cat was the cause until I disturbed the first shrike of the season from some hedge croppings on which I found two fresh-killed young hedge-sparrows nearly full grown which had evidently been taken from a nest near. One had its head

pulled off, and eaten no doubt, while its companion was gibbeted on a large thorn, the butcher bird having crushed the skull and brains in forcing the young sparrow to the bottom of the thorn: the thorn ran right through the head. Such is nature!

Astwood Bank, Redditch. JAMES HIAM.

The Cuckoo.—The Rev. Mr. Daubeny's note, p. 72, April issue, as to young cuckoo being discovered in a hole in a hollow tree, states that it shows that this bird introduces the egg into the nest other than by the ordinary process of laying. Of course it is now an indisputable fact that the cuckoo does not lay the egg in the nest it chooses to entrust its offspring with, but lays the egg elsewhere and carries it thither in its mouth. This has often given rise to the ridiculous assertion that cuckoos suck little birds' eggs, for the reason that they have been shot carrying *their own* eggs.

St. Albans, Herts, W. PERCIVAL WESTELL, M.B.O.U.
May 2, 1901.

SELBORNE SOCIETY NOTICES.

New Members.—Mrs. Heaton, Gomshall; F. Bingham, Esq., Stoke Newington; John Connery, Esq., Friday Street; Mrs. Ellen Frank, Maida Vale; Mrs. A. M. Bonns, Croydon; Miss Bentall, Weybridge,

A new Branch has been formed at Market Weighton with the following new members:—Earl of Londesborough, Lord Herries, Lord Hotham, T. N. Calverley Rudshire, Esq., Captain and Mrs. Langdale, Colonel Brooksbanks, Rev. M. C. F. Morris, M.A., Rev. W. D. W. Rees, J. Stephenson, Esq., Dr. Jefferson, Dr. and Mrs. Ashwin, Rev. H. H. Shaw, Richd. Simpson, Esq., Mrs. G. L. M. Rees and Rev. Gwyn L. M. Rees, *Hon. Sec.*

Donations and Subscriptions.—The Council begs to acknowledge, with thanks, the receipt of the following donations:—Alfred Waterhouse, Esq., R.A., 20s., Thomas Layton, Esq., 15s.; and the following subscriptions over 5s.: Miss H. M. Dodds, 10s., R. B. Litchfield, Esq., 10s.; and, for the Library, "Some Wild Flowers Worth Knowing," presented by J. S. Comrie, Esq.

NEWS FROM THE BRANCHES.

A lecture was given to the Haileybury College Natural History Society (Junior Branch), on June 3 by Professor Boulger, on Earthquakes, with lantern illustrations.

SOUTH-EASTERN UNION.

The Haslemere Congress of the South Eastern Union of Scientific Societies was, thanks to lovely weather and scenery, bounteous hospitality, exceptionally excellent papers, and the splendid organization of the General Secretary, Dr. Abbott, and the Local Secretary, the Rev. G. Stallworthy, one of the most successful the Union has held. Members of the Selborne Society can become Members of the Union and receive its transactions on payment of 2s. 6d. per annum.

FIELD CLUB RAMBLES.

The rambles of the Field Club have been very well attended. The season opened on April 13, when Mr. Nicholson arranged to take the members to Broxbourne. Unfortunately the weather was not favourable and the excursion had to be abandoned. On April 27 Mr. Marshman Wattson, in the unavoidable absence of Professor Boulger, through illness, conducted a ramble through Epping Forest. On May 4 the country round Southfleet and Darenth was visited, the guide being Mr. A. B. Wilkinson, and on May 11 Mr. Mühlberg conducted a party of fourteen through the pretty lanes and woods in the neighbourhood of St. Mary Cray. The rambles on April 20 and May 18 were arranged by the Croydon Branch, the former being to Croham Hurst, the latter to Chipstead and Coulsdon.

On June 1 a party of a dozen or more started from West Drayton Station and proceeded along the foot of the railway embankment to the River Colne. The stream is the boundary between Middlesex and Buckinghamshire, and its western bank was followed until the pretty ford and bridge at Iver were reached. Thence the ramble was continued to Uxbridge, where tea was provided at the celebrated

Chequers Hotel. The special object of the excursion was to give the members an opportunity of becoming acquainted with methods of collecting our land and freshwater molluscs. A considerable number of species were obtained by Mr. J. E. Hooper, who is Secretary of the London Board of the Conchological Society, and by Mr. Wilfred Mark Webb, F.L.S., who conducted the ramble. After tea Mr. Webb gave a short address on some of the many points of interest presented by molluscs generally, and illustrated his remarks with diagrams and a large number of British and foreign shells, both terrestrial and marine, including some living land shells from the State of Oaxaca in Mexico.

On June 8 Weybridge was visited, Dr. Willson conducting a party of eleven through the beautiful woods on St. George's Hill to the Swiss Cottage, where tea was had. Before returning a visit was paid to Dr. Lionel Beale's gardens at Weybridge Heath. On June 15 we were met at Enfield Station by Mr. Carpenter, who conducted a delightful ramble to Southgate, via the New River and Winchmore Hill. Through the kindness of Mr. Walker a visit was paid to his beautiful grounds, the chief object of interest being the well known Minchenden oak. The party then walked to Wood Green, where Mr. and Mrs. Carpenter most kindly entertained the party at tea.

FORTHCOMING RAMBLES.

July 6.—Ramble from Clandon to Merrow and Newlands Corner, a favourite view point on the summit of the Albury Downs. If time permits a visit will be paid to the Silent Pool. Take cheap return tickets to Clandon, 2s. 3d. Train leaves Waterloo 2.22, Vauxhall 2.27, Clapham Junction 2.32. Tickets at the same fare are issued by the train leaving Kensington (Addison Road) at 1.50. Guide Mr. A. B. Wilkinson.

July 13.—Ramble to Marden Park and Oxted. Train leaves London Bridge (L.B.S.C.R.) 2.55, Victoria 2.30. Take cheap return tickets to Woldingham, 1s. 6d. Tea at Oxted. Guide Mr. Mühlberg.

July 20.—Croydon ramble. Meet Mr. Peters at East Croydon Station (L.B.S.C.R.) at 3 p.m. Take return tickets from Victoria, 2.30; London Bridge, 2.25.

July 27.—Epping Forest. Meet at Theydon Bois Station on arrival of the 2.41 train from Liverpool Street. Day return ticket, 1s. 4d. Walk to Woodridden Farm, and thence through Monk Woods to Foresters' Arms, for tea, about 5.30. Return from Chingford about 9.15. Guide Mr. C. Nicholson, who will be in the east side suburban booking office at Liverpool Street at 2.15.

ANSWERS TO CORRESPONDENTS.

L. F. M.—(1) *Lepidium Draba.* (2) *Allium vineale.*

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 16, Mount Ararat Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, Mr. R. MARSHMAN WATTSON, 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 140. AUGUST, 1901. Vol. XII.

SELBORNIANA.

The Deficit.—Attention is specially directed to the notice on page 159 of this number with reference to the special effort which the Council is making to at once wipe out the small remaining deficit, so as to enable the Society to carry on its proper work unhampered.

Gilbert White.—Mr. W. Warde Fowler writes:—

"Kindly allow me to point out that in the current number of Nature Notes (p. 134) your reviewer is in error in attributing any 'strictures' on Gilbert White to me. The words he quotes are not mine, but those of Professor Miall, and cannot even by the most sensitive Selbornian be regarded as a 'stricture,' if they be taken in connection with the paragraph which immediately follows them. When Professor Miall says that White for fifty years steadily refused all preferment that would vacate his Fellowship, he is simply stating a fact which even Mr. Holt-White's admirable biography cannot disprove, as it has undoubtedly disproved the notion that White's private income should have disqualified him from continuing to hold his Fellowship. Professor Miall's point, as I understand it, and as a Fellow of an Oxford College would naturally understand it, is that White did not do what was expected of a Fellow, viz., vacate his Fellowship by taking a College living of sufficient value to cause the vacancy. He took an unusual course, which locked up a Fellowship for fifty years, and a Fellowship too which had a peculiar value in those days, inasmuch as it would have been open to competition by members of all other Colleges. It is only just and right that this should be said, and it constitutes no 'stricture' upon White, especially if it be followed by a sentence such as that with which Professor Miall concludes the next paragraph. 'White paid his debt to his College fully and nobly, by a masterpiece now to be counted among those possessions of the English race which are above price.'

"It is no doubt difficult for those who are not familiar with College life to understand why White's retention of his Fellowship should have ever been matter of criticism at Oriel. Let them consider that College endowments were meant for men who lived and worked in the College, and that it was a wise statutory provision which compelled a man to resign his Fellowship if he took clerical preferment or came in for a fortune. If vacancies had not been created in this way from time to time, injustice would have been done to younger men on the look out for Fellowships. In fifty years, under ordinary circumstances, White's

Fellowship might have been useful to several young men, who would successively vacate it by taking College livings. White neither resided in College nor took a College living such as would cause him to vacate: hence the criticism, so far as there was any. Mr. Holt-White's book seems to me to show that towards the end of White's life such criticism had ceased, and that he was on cordial terms with the Provost and Fellows. Probably they had begun to appreciate the fact which Professor Miall emphasises, that he was repaying his great debt to the College with ample interest."

FARRINGDON CHURCH.—We have been asked to call attention to the fact that the steeple of Farringdon Church—a church at which Gilbert White, it will be remembered, acted for many years as curate—is much in need of repair, a matter beyond the means of the parish. As members of the Society may be willing to contribute, we shall be happy to receive any contributions, if addressed to the Editor.

THE VIEW FROM RICHMOND HILL.—The following is part of an article in the *Daily Express* for July 17:—

"Standing at a window of the Star and Garter, and looking out over the beautiful Richmond prospect, now threatened with bricks and mortar, one can understand the enthusiasm of those who are now making such strenuous efforts to prevent the conversion of this fair stretch of country into a mere vista of bricks and mortar.

"Under the hotel terrace lies the sweet open space of the Petersham meadows, embowered by the trees of the hotel and the Dysart estates. Between curving banks flows the deep green Thames, and like an emerald in a dusky silver setting lies Glover's Island, given to the world for ever by Mr. Max Waechter.

"Beyond are dark green masses of trees, with intervening lawns, on which the grey shadows lengthen. Here peeps the top of a church spire, and there, over the bend of the river, the end of Eel Pie Island.

"This is the prospect, famous for hundreds of years, painted by artists and sung by poets of many generations, which the owners of the Marble Hill estate, Messrs. Cunard, senior and junior, will spoil if their building operations continue as they have begun. Into their estate, once owned by General Peel, on the Middlesex side of the Thames, they have thrust one road of suburban villas and are now cutting three parallel roads, all leading through the heart of the wood towards the river. By developing the estate in this fashion they will cut out the heart of the view from Richmond Hill, destroying the umbrageous shield which has hitherto hidden the villadom of St. Margarets.

"Is there no remedy? Sir Whittaker Ellis, who raised the question some weeks ago, told an 'Express' representative yesterday that the only hope now lies with the County Councils of London, Middlesex and Surrey. If they would combine they might purchase the whole of the 'undeveloped' estates on the Middlesex side from Richmond Bridge to the Orleans property opposite Eel Pie Island."

On the 19th a Conference of the various public bodies concerned was held at the London County Council offices, with the result that there is every prospect that all necessary steps will be taken to save the view. The workmen have been withdrawn from the Marble Hill estate and the felling of trees has ceased.

THE BISHOP OF HEREFORD'S BILL FOR THE PREVENTION OF CRUELTY TO WILD ANIMALS.—This bill runs as follows:—

"Be it enacted by the King's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and

Temporal and Commons in this present Parliament assembled, and by the authority of the same, as follows :—

"**1.**—(1) The word 'animal' in this Act means any beast or bird that is not included in the Cruelty to Animals Acts, 1849 and 1854.

"(2) Any person who either—

"(*a*) takes part or assists in the hunting, coursing, or shooting of any animal which has been, or is, kept in confinement, or under restraint, and is released for the purpose of such hunting, coursing, or shooting ; or

"(*b*) keeps or uses, or assists in the management of any place for the purpose of such hunting, coursing, or shooting, or permits any place to be so used,

shall be liable, on conviction in manner provided by the Summary Jurisdiction Acts, to a penalty not exceeding *twenty pounds* for each day on which he commits such offence, and in default of payment to imprisonment, with or without hard labour, for not exceeding three months.

"(3) Any person who, whether principal, agent or servant, receives money, or other consideration, for the admission of any other person to any place kept or used for the purpose aforesaid shall be deemed to be the keeper of that place.

"(4) This Act shall not apply to the hunting, coursing, or shooting of any animal which has been released from all restraint or confinement, and has been at full liberty, *three months* before the day when such hunting, coursing, or shooting takes place.

"**2.**—This Act may be cited as the Prevention of Cruelty to Wild Animals Act, 1901."

It must be explained that this bill aims at the abolition of certain spurious sports, and thus at the protection of those animals which, though nominally wild, are in fact kept in confinement and released for the immediate purpose of being hunted, coursed, or shot. The bill does not apply to any form of sport which is concerned with really wild animals, which have never been in confinement. The Cruelty to Animals Acts, 1849 and 1854, with the exception of a Section which relates to fighting and baiting animals, apply exclusively to domestic animals. The Act for the Prevention of Cruelty to Wild Animals in Captivity, 1900, does not apply to the hunting or coursing of any animal unless it has been liberated in a mutilated or injured state. At present the animals which this bill is intended to protect enjoy no legal protection whatever from any kind of cruelty in sport.

The Rev. J. Stratton, Hon. Sec. Sports' Department, Humanitarian League, has recently asked the Principals of Oxford and Cambridge Colleges, and the Headmasters of a number of Public Schools and Grammar Schools, if they could

support the above-mentioned bill by signing the following declaration :—

"I cordially approve of the Bishop of Hereford's Bill for the Prevention of Cruelty to Wild Animals. I consider that the time has come for suppressing by law such sports as hunting park-deer, rabbit-coursing, and shooting birds from traps."

He has received affirmative replies from about 130 Principals and Headmasters.

THE DESTRUCTION OF BIRDS.—Selbornians, and other readers of NATURE NOTES, will be pleased to hear that the Humanitarian League has prepared a bill with the object of putting an end to the wholesale slaughter of birds for millinery purposes. Their intention, which we all hope will meet with success, is to get it into Parliament. A reference is made in the bill to the recent sale in Mincing Lane, when a single dealer offered for sale 2,151 birds of paradise, and 1,181 Impeyan pheasants, together with a large number of other species. The clauses of the bill are as follows :—

"Whereas it is expedient to amend the law with reference to the use of the plumage of rare and beautiful birds for the purpose of ornamentation, be it therefore enacted by the King's Most Excellent Majesty, by and with the consent of the Lords Spiritual and Temporal and Commons in the present Parliament assembled, and by authority of the same, as follows :—

"(1) Any person who after the commencement of this Act shall wear, or shall have in possession for the purpose of wearing, whether separately or attached to any hat, bonnet, or other article of dress, any part of the plumage, skin, or body of any bird named in the Schedule appended to this Act, or shall offer for sale or have in possession for the purpose of sale, such article of dress as aforesaid, any part of such plumage, skin or body, shall be guilty of a misdemeanour, and may on conviction by a Court of Summary Jurisdiction be fined in any sum not exceeding £5. On every such conviction the skin, body, or plumage of such bird found to be in the possession of the person thus convicted, and any article of dress to which the same may be attached, shall be confiscated to the Crown, and the costs of the prosecution shall be borne by the person thus convicted.

"(2) Every person convicted under this Act shall have the same right of appeal as if the same penalty had been imposed by a Court of Summary Jurisdiction on a conviction for other misdemeanour.

"(3) This Act shall come into force on the 1st day of January next.

"*Schedule.*

"Egret, or the female white heron (whose plumage is known as osprey), bird of paradise, humming-bird, Impeyan pheasant, tern, kittiwake, kingfisher."

The International Association for the Advancement of Science, Arts and Education, will hold its Second International Meeting at Glasgow, in the University and in the International Exhibition, from July 29 to September 27, 1901. Besides serving as a link among universities and learned societies, &c., one of the most important functions of the meeting will again be, as at Paris last year, to study and interpret the matters of scientific, geographic and other interest afforded by the Exhibition, by means of lectures and conferences, with demonstrations and visits under skilled guidance. The various national groups which co-operated last year at Paris will again be represented at Glasgow; and their lectures and conferences, &c., will include Pure and Applied Physics, and Chemistry, Electricity and Engineering, Agriculture and Forestry, Geography and Colonisation, Hygiene, Scottish History and Archæology, Fine Art, &c. Much attention is also being paid to education in its many branches—Child Study, Nature Study, Methods of Science Study, Modern Language Study, Manual and Technical Education, Museums, Geographical Education, History and Organisation of Secondary Education, the whole concluding with a series of conferences on immediately "Realisable Progress in Education." The General Secretary is M. Liard, Permanent Secretary of State for Higher Education, Paris, assisted by Professor Patrick Geddes, who may be addressed at 83, Bath Street, Glasgow.

Death of Mr. Stillman.—We take the following from the *Westminster Gazette* of July 10:—

"We announce with deep regret that Mr. W. J. Stillman died at his house in Surrey on Saturday, in his seventy-fourth year. It is only some nine or ten weeks since the autobiography of the well-known special correspondent of the *Times* was published, and his many friends had hoped that there was little truth in the disquieting rumours in circulation a week or two ago.

"Mr. Stillman, who, as our readers will not need reminding, was a frequent contributor to our correspondence columns. was born in 1828 at Schenectady, New York State. His father was a mechanic and inventor; his mother a remarkable woman of the old Puritan stock. The boy was brought up under the shadow of a repressive religion, tending to a morbid anxiety of soul rather than to edification and light. At the age of ten he decided that, in the interest of his spiritual development, he must leave home and live his own life. Accordingly he ran away with a comrade of as many years and, as he thought, of an equally enterprising spirit. But the expedition was not a success, and the runaways did a wise thing by returning home after a few days of the free life. With very little more care for the material needs of a journey, Stillman set out some ten years later for a voyage across the Atlantic.

"To those who only knew his later years it may be surprising to learn that he was at one time a landscape-painter, of no small reputation among his countrymen as 'the American pre-Raphaelite.' But even then he wavered between art and politics, and yielded to each impulse as it came. Now he was rushing to Vienna on a secret mission for Kossuth; then drifting to Paris as an art-student; then at work again in America as painter and editor of the *Crayon;* then back to England to worship at the shrine of Ruskin and Turner; then taking service with the Government as American Consul in Rome during the last days of Pius IX. Wherever he went he seemed naturally to fall in with interesting people. In London he was the intimate friend of Arthur Hugh Clough and the Rossettis. He travelled with Ruskin in Switzerland, a somewhat troubled journey which developed a considerable incompatibility of temper between master and pupil. The 'Master' liked submission and obedience in his disciples, and Mr. Stillman was not eminent in either of these virtues. The Roman Consulate brought him into contact with Pius IX., and as Consul in Crete Mr. Stillman was in the thick of the Cretan insurrection of 1866, and, so far as official correctitude permitted, friend and helper of the insurgents.

"In national characteristics Mr. Stillman was both American and English. Though after boyhood he lived only at intervals in the United States, he was perpetually running to and fro. Of a voyage across the ocean he thought as little as ordinary people of one across the Channel. In nervous restlessness he was always a typical American.

"'Perhaps his material prosperity and success,' says the *Times* in concluding its obituary notice, 'might have been more signal had his tastes and gifts been fewer. Certainly his life would have been less full, and the man less engaging. When finally he might have been thought to have earned complete retirement, and supposed himself to be enjoying it, he took to reclaiming Surrey heathland as earnestly as if his garden had been an American pine forest. He was as indignant with the savagery of gamekeepers and boys to squirrels and wild birds as if the persecutors had been Pashas and Beys. All the time he maintained his freshness of interest in the current of international politics throughout the globe, and his pen discussed in periodical literature every new controversy on art and archæology.'"

Persevering Humanity.—Some of our readers may have seen in the daily papers some reference to a noble act of humanity on the part of a working man at Shotts in Lanarkshire. Mr. J. S. Comrie, a member of the Council of the Society, has verified the facts. It seems that some six or seven months ago a man threw a dog down a disused mine shaft, 100 feet in depth. Hearing its cries people threw down food;

but for nearly two months the dog apparently left the bottom of the shaft. Its cries being heard again, Francis Carty constructed a variety of traps and ultimately succeeded in rescuing the poor animal nearly six months after it was thrown down the mine. The dog is now alive and well, and several sympathisers have given Carty tangible proofs of their appreciation of his conduct.

THE ANGEL IN THE LILAC-BUSH.

UNTIRED of will, with tireless tongue
From morn to latest eve has sung
The thrush who, all through May and June,
Has kept my garden close in tune.
There is no separate tree or flower
But owns her harmonising power,
And feels to-day in every part
As if it had one human heart.

The crake is silent in the vale,
The cuckoos cease their wandering tale,
But still, as if it felt each morn
Some newer call for thanks were born,
This angel in the lilac-bush,
Impatient of a moment's hush,
Gives unto whom no voice is given
The note of praise that sounds in Heaven.

H. D. RAWNSLEY.

AVEBURY.

HIGH up on the Wiltshire Downs, in one of those slight hollows where the trees will grow and give a pleasing diversity to the landscape, lies a little village that is full of interest. The attention of Selbornians has been drawn to it of late through the action of their President, and they may be assured that a visit to Avebury will well repay any pilgrimage that they may make; for there, and in the immediate neighbourhood, are sufficient tokens of man's handiwork to join together many a thread of history, and recall the memories of many periods long past. And there will be, in addition, the natural beauties of the downland, and close by one of the most delightful panoramic views that the downs can afford. These downs, so well loved and praised by Richard Jefferies, stretch for many miles across the county, and the health-giving down air blows across, even in the hot days of summer, with refreshing

coolness. It is easy in the sultry summer months to understand and appreciate Jefferies' praises of the downs, and see why he urges all to spend what hours they can in breathing the bracing and exhilarating air.

The whereabouts of Avebury needs to be explained, for it is not an easy place to find, and it is not known like many other places, more famous but not more interesting. The traveller along the great Bath road passes close to it between Marlborough and Calne. It lies a little distance off to the northward; no railway line is near, and no station within seven miles or so. Two roads lead from the main road, one branching off at West Kennett and the other by the Beckhampton training stables, and from Avebury there is another route to Swindon. Close alongside the Bath road rises the great artificial mound of Silbury Hill, the use and purpose whereof no man seems able to understand; but the origin of it is manifestly to be placed far back in early days, before the history of these parts began to be written.

In Avebury itself, this greater edition of Stonehenge, it is not the great stones alone that attract and rivet the attention. Rather it is the great rampart that surrounds the whole. The stones that still remain are neither so many in number nor so prominent in position as to strike the eye most forcibly. Of the original number comparatively few are left, and they are scattered about, some standing like sentinels in a field, others fallen flat upon the ground, while some are to be found in a farm, against a wall, or in a hedgerow. For former owners of the property and inhabitants of the village have not scrupled to appropriate to their own use these remnants of antiquity, and break them up for material to build their own houses, barns and walls. Let us hope that such acts of vandalism will never be repeated in Avebury. The greater part of the little village lies inside the rampart, and the best view of the great circle is to be obtained by mounting to the top where the road enters. The great mound is still unbroken for some three-fourths of its original extent, except where the roads pierce it, but the majority of the stones still existing are to be found to the northward of the great enclosure. The village lies in the middle. Outside, a long row of stones stretches as far as the main road at West Kennett, and a few more stand erect and solitary at some distance from the road to Beckhampton.

It is a wonderful survival of a forgotten and unrecorded past. What was this place? No one can give a satisfactory answer. Those stones were set up before our history began to be written, and by men like those who, in another part of the same county, set up the better known, but not more magnificent, Stonehenge. Why they set them up, and what they did there, we cannot say. That they were for some religious purpose is most probable, for nothing tends to show that they were for any purpose of defence. Camps and fortifications on other parts of the downs are evident

enough, but they command some road or means of approach: here at Avebury there would be no call for any fortification, for it is not a spot that could be selected either for attack or defence, and the great rampart with the ditch inside is itself sufficient evidence. We can only speculate, we cannot know for certain: all that we know is that in this great circle of Avebury we are in face of one of the oldest existing traces of man's handiwork in our country. Curious traditions indeed would carry us back to patriarchal times.

The interest of the place is not confined to the circle and the stones. Other threads of history are to be picked up to unite us with other periods of the past. The barrows on the downs, the old Roman road that ran close by, the Wansdyke, the camps, all have an interest to the lover of history. And in the village we follow on to times not quite so remote, and see in the old church the handiwork of Saxon and Norman builder, altered and adapted by more modern hands to modern needs, while one name of but a short while ago will tell us of the religious persecutions of the century just gone.

A tribute of admiration must be paid likewise to the picturesque old Manor House of sixteenth century workmanship, and to the beauty of Nature's handiwork in the avenues of trees that stretch beside it. It will be acknowledged that Avebury is a worthy place for a pilgrimage.

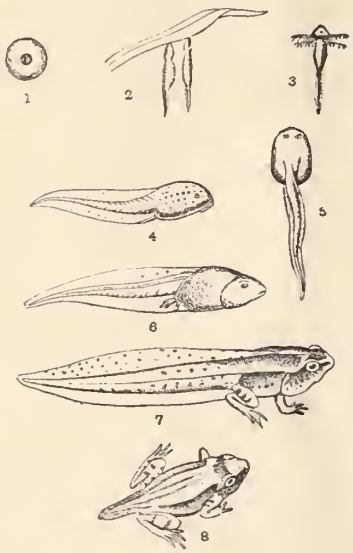
And before leaving the neighbourhood the pilgrim must not fail to wend his way a little farther, and, as he takes his stand above the Cherhill "White Horse" let his eye wander over the scene below. The "horse" is of no antiquarian interest, but a more recent imitation of famous figures. The view, however, is superb. Bowood, with its wealth of trees, and Blackland Park and the ridge beyond, whereon stand out the spire of the church at Derry Hill, and Maud Heath's monument; and the rolling downs over Heddington, whereon Cavalier and Parliamentarian fought the fight of Roundway Downs, and the tiny villages nestling in the trees; and Calne with its grand old church, and memories of S. Dunstan and S. Edmund Rich, make up a charming picture in this North Wilts country. And the keen down air blows across to invigorate and brace the frame; and the chalk that lies beneath the feet, and the wind-swept clumps of beeches on the heights, and the glorious woods below, combine to speak of a higher handiwork than man's, and carry us back to a far remoter past than the old stones and rampart of Avebury itself.

HERBERT E. N. BULL.

REVIEWS AND EXCHANGES.

Amphibia and Reptiles. By Hans Gadow, M.A., Ph.D., F.R.S., being volume viii. of "The Cambridge Natural History." Messrs. Macmillan and Co. Price 17s. net.

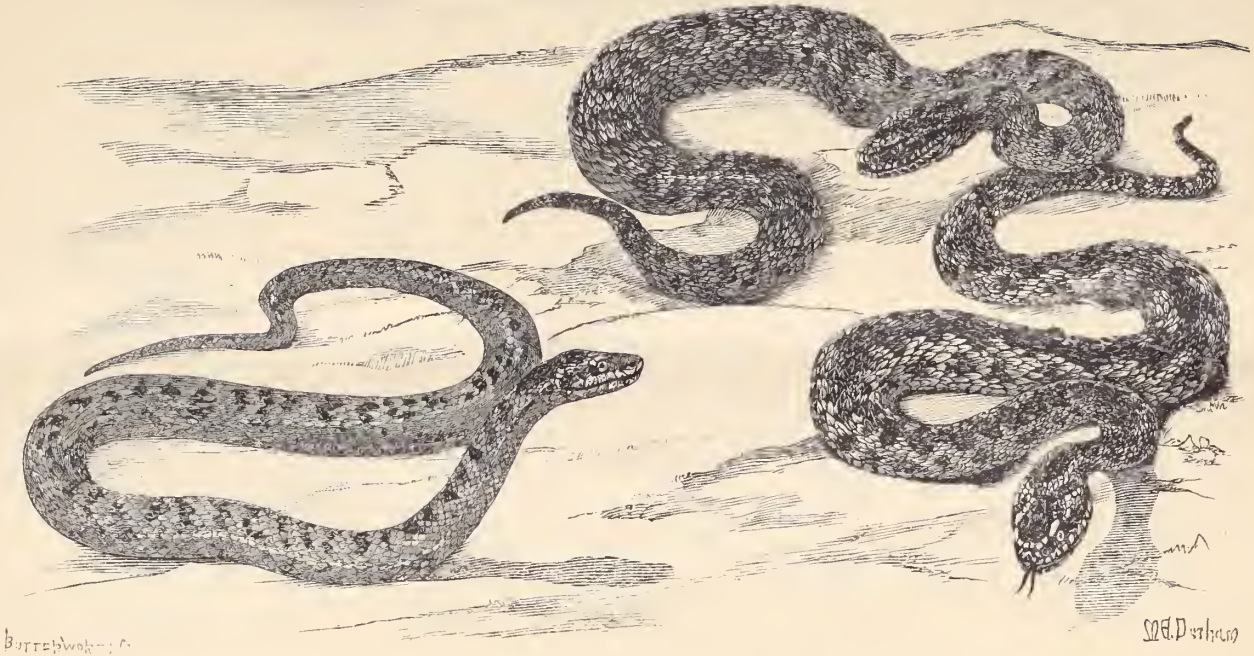
The volumes of the Cambridge Natural History have hitherto appeared at such long intervals as to bring this practically indispensable work within the reach of even the more slender purse of any serious student or amateur. The study of amphibia and reptiles is, as Dr. Gadow says in his preface, "not very popular," as there "is a prejudice against creatures some of which are clammy and cold to the touch, and some of which may be poisonous. People who delight in keeping newts or frogs, tortoises or snakes, are, as a rule, considered eccentric."



Rana temporaria. EIGHT SUCCESSIVE STAGES IN THE DEVELOPMENT, FROM THE EGG TO THE ALMOST COMPLETE FROG (NATURAL SIZE).

Rana esculenta. THREE STAGES OF THE MOVEMENT OF THE TONGUE (NATURAL SIZE).

As from our earliest days we have always belonged to this eccentric class, we naturally welcome Dr. Gadow's comprehensive volume. It is, the author says, "intended to appeal to two kinds of readers—to the field-naturalist, who, while interested in life-histories, habits, and geographical distribution, beauty or strangeness of forms, is indifferent to the homologies of the metasternum or similar questions;—and to the morphologist, who in his turn is liable to forget that his specimens were once alive." Whilst the work may, perhaps, suffer from the fact that one of the groups to which it is devoted has no popular English name, Dr. Gadow has an advantage over some of his fellow-contributors to the series in that he is able to devote a volume of nearly 700 pages to two groups which only comprise about 1,000 and 3,500 living species respectively, as against 8,000 fishes and 10,000 birds. How admirably he, under these circumstances,



Coronella lævis, SMOOTH SNAKE (LEFT), AND TWO *Vipera berus*, COMMON VIPER (RIGHT). × ½.

meets the requirements of that first class of his readers whom we represent in these columns, may be gathered from the statement that he is able to devote some six or eight pages to most well-known forms, such as the common frog, toad, or chameleon, and from the following passage referring to *Testudo græca* and *T. ibera*:—"The habits of these Moorish and Greek tortoises are very much alike, and since they enjoy the distinction of frequently being kept as pets in gardens, where they are allowed to look after themselves, a great many incidental and odd observations have been made on them. They are essentially vegetable feeders, but their taste varies individually and with the season, also according to the vegetation of the country they happen to come from. Most of them enjoy juicy plants, for instance, lettuce and cabbage; the flowers of the dandelion attract them not merely by their bright colour; clover is also a favourite food, and an enclosure of grass-land with clover in it is soon cleared of the latter; grass is also taken, in default of anything better. Some of my specimens gradually bite large holes into gourds and pumpkins. . . . In close captivity they often learn to take and to like bread soaked in milk or water. They drink slowly and at length, but scarcely ever when they have succulent food. There is one thing which they do not eat, namely, "black beetles," although they are warranted to do so by the men who hawk them in the streets. Worms, slugs, &c., are often mentioned as part of their occasional diet, but I am not aware that any of the hundreds which I have watched have taken such creatures, in spite of every opportunity. Their habits are very regular. They learn to know the geography of their domain thoroughly. . . . Although their mental capacities cannot possibly be called brilliant, they soon learn to distinguish between different persons, and they will come up to be fed, but their memory for localities is surprising. . . . Dr. Girtanner of St. Gallen in Switzerland testifies to their appreciation of music . . . . That they can hear, although their ears are not visible, but covered by the ordinary skin, is obvious enough from the fact that during the pairing season they emit feeble piping sounds. . . ." Gilbert White's specimen of *T. ibera*, the shell of which, nearly ten inches long, is now in the Natural History Museum, South Kensington, seems to be one of the oldest specimens whose age—over fifty-four years—is approximately known. It is unnecessary to say that Dr. Gadow adequately discusses such topics as the change of colour in chameleons, the poison of snakes and that remarkable persistence of larval conditions known as "neoteny," which is most typically exhibited by the Mexican Axolotl. More purely anatomical questions, except those of systematic importance, such as the chondro-skeleton, the organs of special sense and the parietal foramen are, perhaps, passed over somewhat too briefly; and, though it is but a small matter, the tables of the classification adopted, given on pp. xi. and 10, do not agree, owing to the omission of any statement that "Stegocephali" and "Phractamphibia" are synonymous. By the courtesy of the publishers we are able to reproduce some specimens, which specially illustrate our British forms, out of the 181 illustrations, which, with a coloured physical map of the world, add to the attractiveness of a work which even the most "general" reader will find unexpectedly interesting.

Bird Watching. By Edmund Selous. Messrs. J. M. Dent and Co. Price 7s. 6d. net.

We rejoice to know that a new sport has arisen in our day—a sport against which the most critical moralist has not a word to say. Field-glasses and telephotoscopes are replacing the gun in the hands of the naturalist; and, as Darwin discovered early in his "Beagle" voyage, there is after all a greater fascination in watching the life of animals than in compassing their death. Mr. Selous has felt this fascination to the full, and in this dainty volume has, in a truly scientific spirit, given us his own observations, unmixed with hearsay or quotations from authority, and in the main unqualified by speculative deductions. The present work deals mainly with plovers, doves, snipe, gulls, ravens, rooks, guillemots, sand-martins and a few other species; but we are pleased to see hints in one or two places that we may at some future time have a further instalment of these observations. As the book is illustrated with six photogravures, besides other illustrations, all from the well-known pencil of Mr. J. Smit, it seems to us pheno-

On a Guillemot-Ledge.

menally cheap at the price at which it is issued. Since a good deal has appeared in these pages of late as to the imitative faculty in birds, our readers will be specially interested in that one of the two illustrations which Messrs. Dent kindly

MASTER AND PUPIL: HOODED CROW FLYING WITH PEEWITS.

allow us to reproduce in which a hooded crow is imitating the flight of the peewit. But for their wings the guillemots in the other picture might be a colony of penguins.

Plant Studies: an elementary Botany. By Professor J. M. Coulter. Henry Kimpton. Price 7s. 6d. net.

Professor Coulter's name is now well-known as a guarantee of excellent educational work, previous volumes issued from the botanical department of the University of Chicago having earned him this repute. The present book, one of the "Twentieth Century Text-books," is professedly a school book and mainly compiled from his two previous volumes, "Plant Relations" and "Plant Structures." It comprises less than 400 pages with illustrations on almost every page, and falls, as the writer says, "into two divisions, the first fourteen chapters being dominated by Ecology, . . . the remaining eleven . . . by Morphology." It is not merely a reader, nor is it a laboratory guide; but it will prove, we do not doubt, eminently stimulating to a beginner. Perhaps our transatlantic botanists dwell unnecessarily on leaf-mosaic and indulge somewhat freely in Kernerism; but a first book that deals with seed-dispersal, symbiosis, and plant societies (in over 50 pages), and gives 120 pages to the Cryptogamia and 16 to Gymnosperms, as against 25 to Angiosperms, is at any rate refreshingly novel. Many of the illustrations are exquisite, though the highly surfaced paper they require renders the volume fatigueingly heavy.

Nature Songs. By Emily Read. Wells Gardner, Darton and Co.

Two things go to make a poem, the thought and its expression. No one who critically examines this dainty little volume containing some fifty short poems can deny that Miss Read very often, if not always, has a truly poetic thought. It is perhaps a harmless pedantry to give these fancies such portentous names as "Commensalism," "Dehiscence," "Foraminifera," or "Hypnum Triquetrum";

and one is not surprised to find in what is, we believe, the first volume of a young writer, much that is reminiscent; nor indeed is one altogether sorry when, as here, the suggestions are those of Christina and Dante Gabriel Rossetti. We hope at some future time to give some specimen of Miss Read's verse in these pages; but in the meanwhile our one word of fault-finding shall be that here and there we find a line deficient in music or rhythm, and suggesting that a truer ear or everer self-criticism would have hit upon some slight verbal alteration which might have prevented what is now a jarring note.

Amateur Fish Culture. By Charles Edward Walker. Archibald Constable and Co. Price 2s. 6d. net.

This little book of 100 pages is a reprint of a series of articles contributed by a well-known sportsman to *Land and Water*, devoted mainly to the rearing of trout, though touching on that of other *Salmonidæ* and on that of coarse fish. It is a subject on which the existing literature is not very extensive; but we notice that in the chapter dealing with the enemies of young trout there is no mention of leeches or of Mr. Daubeny's article on this topic in NATURE NOTES. The hints given are practical and good as far as they go and there is no pretence at scientific knowledge in the book.

Taxidermy: comprising the skinning, stuffing, and mounting of birds, mammals, and fish. Edited by Paul N. Hasluck. Cassell and Co. Price 1s.

This handbook consists mainly of articles by Mr. J. Fielding-Cottrill contributed to *Work*, supplemented with other matter from that periodical, of which Mr. Hasluck is editor. We have but little interest in amateur taxidermy, which want of interest is likely to be converted into very active dislike by instructions as to how to convert a beautiful bird into a hand-screen, or by advertisements, such as that which faces the title-page of this book, of "special terms for quantities" of "sea birds, fresh and clean shot." Though he will not want to make a mole's skin into a purse, the professional museum curator may find some useful hints in this volume, which actually fulfils more than the promise of its title, as it deals also with the preparation and dyeing of skins, the mounting of insects and the making of glass cases and cabinets.

Bulletin de l'Association pour la protection des Plantes. No. 19. Geneva, 1901.

As in previous years, M. Correvon is left to bear a disproportionate share of the burden of this important publication. Besides the records of his own Association and its gardens and several charming little poems, he recounts the progress of Pro Montibus Italicis and the formation of a kindred German society with its headquarters for three years at Bamberg under the presidency of M. C. Schmolz. M. Correvon includes three beautiful views of English yews and one of the great sycamore at Melchthal, and he has some very flattering words to say about ourselves.

Catalogue des Plantes contenues dans le Jardin botanique alpin de la Linnæa à Bourg-St. Pierre, Valais. By Henry Correvon, Geneva, 1901.

This succinct florula, illustrated by a plan and two views, contains two lists, one of the wild and the other of the cultivated plants of the garden. The latter states the indigenous habitat of each species, the nomenclature being mainly that of the *Index Kewensis*. The garden having been originally founded on a gift from the late Dr. Romanes and named partly in honour of our Linnæan Society, its progress should specially interest English botanists.

The Naturalists' Journal for July contains, *inter alia*, a seven-page report of the recent Congress of the South-Eastern Union of Natural History Societies at Haslemere.

Proceedings of the South London Entomological and Natural History Society, 1900. Price 2s 6d.

This excellent report contains the address of the retiring President, Mr. W. J. Lucas, a paper on the pupation of *Cossus ligniperda*, by Mr. R. Adkin, one on Wing-structures in Lepidoptera, by Dr. T. A. Chapman, and one on the Ova of Lepidoptera, by F. N. Clark, the two latter illustrated, besides full reports of meetings and a list of members.

Received:—*The Victorian Naturalist* for May and June; *The Naturalist, Irish Naturalist, Science Gossip, Our Animal Friends, Humanity*, and *Agricultural Economist* for July.

NATURAL HISTORY NOTES AND QUERIES.

Notes from Aldershot.—It may interest your readers to hear that that handsome bird, the grey wagtail, nested this summer on the Wey, near Farnham. The butcher bird seems to be very common about here, especially on the Hog's Back. In one of their larders I saw sixteen bumble bees, a red admiral and two lizards, one of which had had its tail pulled off—all of them impaled. In another larder I saw a frog, a bumble bee, a young bird and the remains of a wren, I think. But it is very difficult to find out exactly what there is in the larder, because the creatures are distributed in all the thorn trees within fifty yards of the nest.

I see in your March number a note on bats appearing in winter. At Felixstowe, on the Suffolk coast, I have them in *every month* of the year, and I was only there for a year, and in almost every case after sunset, though I have occasionally seen one early in the afternoon. C. H. T. W.

A Well-occupied Tree.—The following, I think, is worth recording. In the hollows of a small but aged elm-tree, standing in front of a well-known inn on the Faringdon road, and within three miles of the town of Abingdon, there was, in 1900, the following somewhat queer collection of "happy families," viz., a stock-dove's nest with young, a jackdaw's similarly well endowed, two starlings with broods of cackling young and, lastly, a nest of five kittens. This year the tree has been tenanted for breeding purposes by a pair each of stock-doves, jackdaws and starlings. The stock-dove, which is by no means uncommon in the woodlands here, is locally known as the "blue rock."

Fyfield, near Abingdon. W. H. WARNER.

Is the Water Vole Vegetarian?—When I saw Mr. Norton's positive answer to his own question, "No, he is not; I can speak with certainty about that," I rubbed my eyes in doubt as to whether I had ever used them to read about the water vole or to look at him.

All our English rodents—hares and rabbits, perhaps, excepted—are more or less omnivorous, and even cannibalistic. The usual diet of the water vole is vegetarian, though he will eat a frog or a fish and the like when he has the chance. Not long ago I watched a water vole in a shallow pond. He dived several times, and on each occasion brought up a thick, succulent piece of grass which he ate before my eyes three yards off. A neighbour lately showed me a hole in his garden in which some "black-faced" rats lived, and also the havoc they had caused among his vegetables. He had caught one and promised to send me another. The "black-face" turned out to be a male water vole which had entered his garden by a drain. Brown rats and water voles are sometimes mistaken for each other. The brown rat's tail at once distinguishes it from the other, as it is much larger and longer.

Because Mr. Norton's water voles eat each other it does not prove that they are not vegetarians. They are far more vegetarian than the common rat.

Market Weston, Thetford, July, 1901. EDMUND THOS. DAUBENY.

Field Mice.—Mr. F. L. Rawlins, Rhyl, refers to field mice on page 95. Does he refer to the long-tailed field mouse or the short-tailed field mouse? The former, I presume. If so, the question why these "only sleep one in a bed" does not agree with my experience either in bee-hives, potato-clamps or in open fields and gardens, where I have frequently disturbed old and young in families even full grown. When a lad I used to find out in stubble-fields by the earth scratched out where to find a nest of mice, and turn them out for the fun of running them down. There is always a back door or second hole of escape, and the first thing I did was to stop up one and then follow the other to the nest, and when one started, stop in the others until the first was killed or lost, as sometimes happened, by its seeking moles' runs, which, of course, could not be followed up.

J. HIAM.

Wild Duck, Indian Cow, Pheasants.—The following have come to my notice.—As young pheasants were continually disappearing a watch was set, and at last one of the semi-tame wild ducks on an estate was seen to fly to the

coops and swallow a pheasant a few days old. As the duck indulged in a similar meal at each visit it had to be destroyed. I have seen common ducks eat mice by the dozen after a rick has been threshed, but have not hitherto known any of their tribe indulge in an appetite for live birds.

On the same estate an Indian cow was seen to eat a pheasant nearly the size of a partridge, with such evident relish as to lead to the belief she had often done the same before.

Market Weston, Thetford. EDMUND THOS. DAUBENY.
June, 1901.

Fowls eating Shrews.—A cat in the village is somewhat varied in her captures, which she places on her owner's doorstep. They consist of birds, rats, long-tailed field mice, short-tailed field mice, shrews, moles, stoats and weasels. She eats the birds, rats and short-tailed field mice only. The fowls make a meal off the shrews, and, together, perhaps, with snakes, are the only creatures, as far as I know, that will feast off these animals. Kestrels and owls kill shrews, but, I believe, do not eat them. The house mouse is a dainty morsel to a barn-door fowl.

Market Weston, Thetford. EDMUND THOS. DAUBENY.
June, 1901.

Greenfinch taking Possession of Nest of Chaffinch.—The Rev. E. Savory, of Bracknell, sends me details of a curious occurrence in the bird world. A chaffinch built its nest in a bush in a garden in Somersetshire close to the path, and was closely observed building every day. The nest was duly completed with the usual care and elegance which characterises the home of this sprightly finch, when to the surprise of the owners of the garden, they found a greenfinch laying eggs in the nest and duly hatching its young.

5, *Glenferrie Road,* W. PERCIVAL WESTELL, M.B.O.U.
St. Albans, Herts.
July 5, 1901.

White Robin's Egg.—Last Sunday I found a robin's nest in a hole left for a scaffolding pole in the wall of a house in course of construction. In the nest was one pearl-white egg, on which the robin was sitting. Being anxious to take the egg before Monday, in case the workmen, returning on that day, should find the nest and destroy it, at the same time wishing that the bird should go on sitting, in case it might lay another white egg, I filled an old robin's egg, taken two years ago, with warm water, sealed the hole with candle grease, and when dusk, substituted the warm water egg for the white one. Although I had to drive the bird off the nest to do this she returned immediately afterwards, and has sat closely since. On blowing the white egg I found it was addled, and had a very thin shell.

I cannot see in any natural history book that a white robin's egg has ever been found before. It would be interesting to know if any of your readers have heard of one.

June 21, 1901. J. B. STILWELL.

[Eggs of this and many other species occur not uncommonly without pigment. —ED. *N.N.*]

Tame Kingfishers.—When fishing at Barton Mills last week, I had a somewhat curious experience, and one which, I think, has fallen to the lot of but few anglers. I was sitting on a garden seat on the bank of the Tuddenham stream. The weather was warm, and fish were shy, and I had fallen into a semi-somnolent state when a kingfisher alighted upon my rod. In a few minutes it was joined by a second bird of the same species. The two kingfishers preened and plumed themselves, and then dived once or twice in quest of fish, returning again to their perch on my fishing rod. This continued for about half an hour, when, no longer able to remain in the cramped position in which I sat, and somewhat dazed with the heat, I raised my rod aloft. The pretty little birds displayed some reluctance in quitting their perch, and for my part I was exceedingly sorry to disturb my pretty little companions. The kingfisher is one of the shyest of birds, and I have never before known birds of this species to display such fearlessness in the presence of mankind.

Newmarket. WILLIAM HOWLETT.

House Martins.—I have observed for the last four or five years that there has been a great falling off in the numbers of these birds, and it appears to me that the numbers decrease every year. I have seen but few this year. Now I find in NATURE NOTES that Mr. Plowright, of King's Lynn, has observed the same thing. I have asked for an explanation once or twice in the columns of NATURE NOTES without success. As the bird is a most interesting summer visitor, which used to swarm here, I should be glad to know the reason why of its scarcity.

Woodtown, Devon. W. F. COLLIER.
July 1, 1901.

Red Mite on Canary.—Can and will any bird-lover tell me what treatment he or she has found to succeed in freeing a pet bird—mine is a canary—from red mite? On his first suffering from them, a year ago, he appeared to be cured after constant washing by me in quassia, the chips having had boiling water poured over them, but after a few weeks they again troubled him, and this time the washing seemed to have lost its efficacy, and perhaps because the weather was colder, he became so weak I discontinued the washing. He has picked up his strength and spirits, but is badly bare of feathers on head, neck and breast, and at times worried by his invisible tormentors. He will now take his bath in the quassia and water himself. He has a tin cage, over which we pour boiling water from time to time.

M. C.

[Having submitted this query to an expert, Mr. Kenneth J. Mackenzie, he informs us that to get rid of this mite, *Dermanyssus avium*, the canary should be painted all over with oil of cloves by means of a camel's-hair brush in the evening, without making the bird so wet that it may take cold. This will kill the young mites and drive off the others. Next morning the cage and all its fittings, troughs, perch, &c., must be thoroughly scalded with boiling water. This process must be repeated three times at intervals of four days, as there is an egg-stage in the life-history of the mite, and it will secrete itself in any cranny where even boiling water may fail at first to reach it.—Ed. *N.N.*]

Toad eating Bees.—The following interesting letter appeared in the *Pall Mall Gazette* :—

"I have been daily expecting to hear what the beekeeper would have to say with regard to the harmlessness of my old friend the toad. Not being an apiarist, I did not feel justified in casting the first stone at him, but most of my friends who keep bees assure me that a toad (out of the hole) in the neighbourhood of a hive makes the 'busy bee' look a fool from a business point of view. No doubt in past days the toad has suffered a great deal, simply on account of his ugliness, but in these more enlightened times he has a good many friends, and justly so. At the same time, one cannot reasonably expect the beekeeper to sing his praises any more than he would those of the fussy little tomtits who provide me with so much amusement throughout the winter months in my back garden, whither I attract them with a piece of fat bacon. You might as well expect the professional fruit-grower to sing the praises of the blackbird.

"Your correspondent, Mr. Heath, might be interested to hear that there is an old West of England saying regarding a useless article that it is 'as much use as a side pocket to a toad.'

"I think it quite possible that the viper would swallow a toad, but I feel certain he would prefer the lively frog were it available. Yours sincerely,

June 27. "TADPOLE."

Frog-tadpole eating Young Pike.—As there is no reference to such a habit in Dr. Gadow's book which we review on another page, we have taken the following from Mr. F. G. Aflalo's interesting *causerie* about animals in the *Morning Leader* for July 10 :—

"I think that I must have mentioned in this column a week or two ago a case of frog-tadpoles devouring not merely pike spawn, but even the young jack themselves. The gentleman who sent me this interesting item of information (of great practical importance to the hatcher of trout) from Loch Awe has added some further particulars in a subsequent communication, which may, I think, interest

readers. There is, he says, one bay in the loch that the pike particularly affect for their spawning. On May 4 he found this bay apparently devoid of life. Two days later he saw one patch of pike spawn, fished for twenty minutes and caught the pair of marauders weighing six and seven pounds. A few days later the grassy bed of the bay was simple covered with pike spawn in patches. He caught a few more pike, but the water was so low that the majority deposited their spawn in the night and then departed. On May 16 he took the secretary of the Loch Awe Fishing Association and showed him the spawn, suggesting that he should put a man there for a few hours to clear it out. The secretary took some of the spawn up to examine it more closely when it hatched out in his hand, less than ten days after it had been deposited by the parent fishes. Two days later than this my correspondent saw both tadpoles and perch eating the fry as it hatched out. Nature was adjusting the balance, and the Association was spared the expense of employing a man to suppress the increase of pike. As an interesting experiment, my correspondent next put some of the spawn in one glass jar together with several tadpoles, while in another he placed a dozen fry. In very little time the tadpoles had eaten half the spawn. They were then transferred to the jar containing the fry, and in less than five minutes the latter were devoured in like manner. My correspondent has, he says, been a fisherman for fifty years and never before appreciated the value of tadpoles."

SELBORNE SOCIETY NOTICES.

New Members.—Wm. John Spiers, Esq., Threadneedle Street, E.C.; Mrs. S. E. Young, Cricklade.

Donations and Subscriptions.—The Council begs to acknowledge with thanks the receipt of the following subscriptions over 5s. :—E. S. Morphew, Esq., £1 1s.; Lady Jenkyns, 10s.; Mrs. Greenwood, £1 1s.

Effort to clear off the Deficit.—In the Treasurer's statement of accounts given in the June number there is shown the considerable old debt of the Society. A member of the Council has offered £2 2s. if others will contribute a sufficient sum to place the account on the right side. The following sums have already been received or promised :—J. S. Comrie, Esq., £2 2s.; Lord Avebury, £2 2s.; F. Crowley, Esq., £1 1s.; Miss Garrett, £2 2s.; Mrs. Lowther, £2 2s.; Sir James Colquhoun, Bart., £2 2s.; Lady Lindsay, £2 2s.; E. S. Morphew, Esq., £2 2s.; Mrs. Dockers-Drysdale, £2 2s.; A. Holte Macpherson, Esq., £2 2s.; Ealing Branch £5. Other members have kindly increased their annual subscription as above acknowledged. Until the deficit has been cleared it is obvious that the Society is crippled in its work and is unable to supply the leaflets explaining its aims, &c., for which there is a constant demand. Remittances should be made payable to the Secretary, Mr. R. Marshman Wattson, and crossed "London Joint Stock—Pall Mall."

Council Meetings.—There will be no Council Meeting on Tuesday, August 6; the next meetings will accordingly be on Tuesdays, August 20 and September 3, at 20, Hanover Square, W., at 5.30 p.m.

FIELD CLUB RAMBLES.

On June 22 a ramble was conducted by Mr. A. B. Wilkinson from Orpington to Farnborough, Greenstreet Green and Down, passing on the way through Lord Avebury's beautiful grounds at High Elms. After tea at Down the return journey was made to Hayes *viâ* Holwood Park and Keston Common.

June 29.—This ramble was one of the fixtures of the North London Natural History Society, but the party of twenty-one consisted mainly of Selbornians. Under the leadership of Mr. L. B. Prout the party enjoyed a pleasant ramble over Oxshott Heath and Esher Common, and the Black Pond was inspected on the way. The afternoon was very warm and bright, and tea at Napper's, near the station, was very welcome. A somewhat hurried walk back to Claygate Station, along green lanes most of the way, to catch the 7.49, brought the enjoyable outing to a close.

On July 6 Mr. Wilkinson conducted another ramble, this time in the neighbourhood of Guildford. Leaving Clandon Station, the route lay through the

grounds of Clandon Park, the seat of the Earl of Onslow. *Butomus umbellatus* was noticed in flower in the lake. On arriving at Merrow, tea was taken at the Horse and Groom, an old-fashioned inn bearing the date 1615. After a short visit to the church, the walk was continued across Merrow Downs, wild flowers being met with in rich profusion, large patches of the wild mignonette (*Reseda lutea*) and the greater mullein (*Verbascum Thapsus*) being specially noticed, as well as the greater knapweed. On reaching Newlands Corner (567 feet above O.D.) the extensive view was greatly enjoyed. The return journey was made from Clandon Station, two and a-half miles distant.

On July 13 Mr. Mühlberg conducted a most delightful ramble from Woldingham to Oxted. Fourteen were present. The greater part of the route lay through Marden Park, and wild flowers (including the bee orchis) were met with in rich profusion. The view overlooking Oxted from the top of the downs was much admired, as well as the old church at Oxted.

FORTHCOMING RAMBLES.

August 3.—No ramble.

August 10.—Ramble round Coulsdon and Kenley Commons. Train leaves Charing Cross 2.5, Cannon Street 2.15, London Bridge 2.18. Take cheap return tickets to Whyteleafe, 1s. 6d. (Change at Purley.) Guide, Mr. Hunt.

August 17.—Ramble round Chipstead. Train leaves at same time as on the 10th. Take cheap return tickets to Coulsdon, 1s. 6d. Guide, Mr. E. A. Martin, F.G.S.

August 24.—Hendon to Harrow, *viâ* Pipers Green, Preston and Kenton. Tea at the Horseshoes, Kenton. Train leaves Moorgate Street at 2.19, King's Cross (Met.) 2.27, arriving at Hendon at 2.55. Take single tickets to Hendon. Walking distance five miles. Guide, Mr. E. A. Nash.

August 31.—Ramble round Woldingham, and Titsey Hill and Limpsfield. Train leaves Victoria, L.B.S.C.R., 2.30, London Bridge 2.55. Take cheap return tickets to Woldingham, 1s. 6d. Guide, Mr. Mühlberg. Tea at Botley Hill.

September 7.—Weybridge. Guide, Dr. Willson. Full particulars will be given in the September magazine.

ANSWERS TO CORRESPONDENTS.

Rev. F. M. Millard.—*Lepidium Draba.*

B. E. S.—*Hypericum elodes*, which is by no means confined to the west.

Rev. B. Wilson.—There is no recent work of moderate price, such as you apparently desire. Cassell's "Concise Natural History," by Dr. E. Perceval Wright (price 7s. 6d.), might answer your purpose. There are plenty of larger books and works dealing with separate groups.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. As the Editor will be away from home during August, communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., care of the publishers.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, Mr. R. MARSHMAN WATTSON, 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 141. SEPTEMBER, 1901. Vol. XII.

VARIATION IN ORCHIS MACULATA.

By the Editor.

I HAVE to thank the Rev. E. F. Linton of Bournemouth, Hants, Miss Agnes Fry, Hon. Secretary of our North Somerset Branch, and Messrs. W. J. Rendall of Malvern Link, A. W. Hudson of Cranbrook, Kent, and H. Goode of Northampton, who have sent me specimens in response to my request appended to Mr. Havelock Ellis's article in Nature Notes for May.

Mr. Linton sent eight specimens authenticated as his subspecies *ericetorum*. These ranged from twelve to eighteen inches in height, the stem in five or six of them being slightly purplish above. The leaves were slightly and very faintly spotted, the lower cauline ones long and narrow, *i.e.*, from five to eight inches long and half to three-quarters of an inch wide, carinate, folded, acute, with slightly reflexed points; the upper leaves much smaller (one to two inches long), narrow, linear, flat, and straight. The spike had become two to two-and-a-half inches in length, and rather lax in fruit: the bracts were purplish when the stem was so; and the flowers were pale and much as described by Mr. Linton in the passage from his "Flora of Bournemouth" quoted in our May number, with the exceptions that they were distinctly honey-scented, and that in some cases the mid-lobe of the labellum was not *much* narrower than the side lobes, nor was it so small as I have seen it. In no case, however, could the lobes be called sub-equal.

Miss Fry writes: "I forward six flowers, all growing in one field (with a northerly slope). The ground is rather dry and not rich—perhaps this may account for the fact that no really dark ones are found. I am inclined to class these as A, B and

C, in Mr. Havelock Ellis's scale; but perhaps I have not really got any dark enough for C. My observations so far as they go confirm those made by Mr. Ellis." So far as I could see, the specimens sent bore out Miss Fry's description.

Mr. Rendall sends me fifty-five specimens "from an upland meadow at the north-east end of the Malvern Hills," and points out that they fall into two practically equal groups. He further remarks that he has seen the two types growing together in the same proportions in the Cotswolds, and that the second group "seems to have a good many characters corresponding with the description given of sub-species *ericetorum*." I examined Mr. Rendall's series very carefully, checking all he wrote and adding my own notes, with the following result. Group 1 includes taller plants, about eighteen inches high. The upper part of the stems was tubular and slightly tinged with purple, as were the bracts. The leaves were carinate, the cauline ones being acuminate and slightly reflexed. The flowers were scentless and mostly dark; but two or three light specimens were among the group, and white ones occur. The three lobes of the labellum were equally broad but the central one was longer; the spots did not form continuous lines, and the spur thickened slightly upward.

Those in Group 2 did not exceed twelve inches in height: their stems and bracts were green: their leaves were, perhaps, just as carinate, reflexed and acuminate as those of Group 1; but they were more faintly spotted and on the upper cauline leaves the spots were much smaller: the flowers were light-coloured, some white ones occurring, and all were honey-scented: the three lobes of the labellum were subequal both in length and breadth, or the central lobe was shorter, the lateral lobes being gibbous and the central one apiculate; while the spur was very slender.

Mr. Hudson writes that for several years he has noticed a very beautiful and distinct form growing in a damp copse, 12 to 20 inches or more high, with leaves sometimes deeply and sometimes very palely spotted and nearly white blossoms, some of which were apparently scentless, whilst others had, "when freshly gathered, a distinct coumarin-like odour." The lower lip of the perianth is very wide (12 or 13 millimetres) and crenately divided into three lobes, but not deeply divided.

Coumarin, whatever its physiological origin and original function, is a perfume widely diffused among flowering plants, both Dicotyledons and Monocotyledons. Its composition is stated chemically as $C_9H_6O_2$, and its name is taken from that of the Tonquin bean, *Coumarouna* (*Dipteryx*) *odorata*, formerly used for scenting snuff. The seeds of *Trigonella Fœnum-græcum*, the Fenugreek, which contain it and are used accordingly as an adulterant of bad hay, were cultivated, presumably for this purpose, as far back as the time of Theophrastus. Among Leguminosæ it occurs also in *Melilotus officinalis* and *M. cærulea:*

it gives its specific name to the early-flowering grass, *Anthoxanthum odoratum*, and to the sweet woodruff, *Asperula odorata*, which imparts its perfume to the Maitränk of the Rhine valley; and, among Compositæ, it is obtained from the North American *Eupatorium aromaticum* and *E. glutinosum*. In the Orchidaceæ it is recorded from the Faham Tea, *Angræcum fragrans*, of Mauritius, and from our British species, *Orchis militaris*, *Simia*, *fusca* and *ustulata*. I should not be surprised to hear of its occurrence in *O. pyramidalis*, or in the sweet-scented *Gymnadenia conopsea;* but I could not detect its perfume, which is known in the trade as "New-mown hay," in Mr. Hudson's specimens when I received them, nor have I ever recognised it in *Orchis maculata*. I may here add, *apropos* of perfume as a distinctive character, that care must be taken to observe a species at all hours and at varying temperatures. I have heard of a scentless form of *Gymnadenia conopsea*.

Mr. Goode considers the species a variable one and sends me one specimen from Maidwell Dales, Northamptonshire. This was a slender plant without purple on stem or bracts. Its leaves were 4 to 6 inches long and nearly an inch broad, carinate, slightly recurved, slightly spotted and subacute. The spike was $2\frac{1}{4}$ inches long and oblong, and the perfume very faint. The ground-colour of the flowers was white, the markings being very disjointed and spotty. The spur was rather long but slender, and the labellum was deeply three-cleft and spreading, the middle lobe longer, but not much narrower than the side ones, deltoid-acuminate, and straight. Mr. Goode comments on the fact that the pollinia are yellow, instead of the more usual green. This specimen seems to me on the whole to be a pale example of *eu-maculata*.

Whilst hoping that my correspondents and others will another year follow up these observations on what is undoubtedly an interesting case of variation, I would call their attention to Mr. Linton's statement that his two forms "are seldom found in the same locality," whilst most of those sent me have been growing together.

It is, of course, extremely difficult to discriminate between merely transitory adaptational modifications and those which are hereditary and sufficiently fixed for taxonomic use. Richness of soil, light and shade, temperature and the hour of gathering may well affect height, size of leaves, depth of colouration and perfume. Cultural experiments are necessary to elucidate these points. The case of *Lychnis vespertina* and *L. diurna* indicates that colour may be a specific character and yet reciprocal exceptions, *i.e.*, a pale variety of a dark and a dark variety of a pale form, may occur. Our experience of other orchids, *e.g.*, *Ophrys apifera*, would make us hesitate in relying on the relative sizes of the lobes of the labellum as a character of sub-specific import; but, on the other hand, as in *Viola*, the length and widening of the spur are, perhaps, more promising.

My present opinion is that there is so much variation in this species in various directions that it is not proved that two distinct races are included under it; and that until this is proved, and unless he has other evidence, as yet unpublished, it is premature for Mr. Linton to speak of "a supposed hybrid."

A NATURALIST'S RAMBLE ON THE BERWICKSHIRE COAST.

TAKING tickets by the only train for Cockburnspath, we arrive there in due course, after not more than the usual amount of delay, which seems a second nature to the North British Railway. We will pass over the intermediate stages, and suppose we have got to Fast Castle, the Wolf's Craig of Sir Walter Scott. As the tide does not suit our purpose, we walk westwards, noting as we go the geological features which have been so often described in the classic works of Sir James Hall and others that it is needless to attempt to paint the scene. We cannot, however, look on it without being impressed with the evidences of the magnitude of time, and the overwhelming character of the forces which made the scene what it is.

Striking the shore at the first practicable point, we observe some plants growing on the cliffs, the common sea pink, or thrift of our forefathers shows its pink or crimson, or rarely white flowers, on many of the ledges. This plant occurs on the sea coast all round our island. Then as we go inland we quite lose sight of it, until we stand on the top of our highest mountains, such as Ben Lawers, Ben Lui, &c. Nor is this the only curious point connected with the plant. On the sea shore the ashes of the plant contain soda, on the mountains it is replaced by potash. Plants from the latter locality have broader leaves than those of the sea coast, but it is a question if the difference is enough to make a variety. Close by we find the sea plantain, which is very abundant on our coasts, and is also found on the mountains, but it differs in one respect from the thrift, *viz.*, it is found at intermediate stations. We can recall two such localities, Forfar and a place in Linlithgowshire, in each case far removed from anything like a river bed. We may remark in passing that mountain plants are sometimes found in river beds at a low elevation, and the explanation is that they have been brought down by floods, but no such explanation will serve in the cases noted. Alongside we find another plantain, the buckshorn, with its much cut leaves. It is far more frequent on the coasts than inland. Not far off at the base of the rocks we see the glossy green leaves of the lovage,

an aromatic plant which in former times was used as a pot herb.

Walking over the shingle, we observe a deep brownish-black stone, with lovely spots of a bright lemon-yellow and red colours, with golden streaks and markings. It proves to be a very rare form of jasper, and when it is polished will form a magnificent specimen. It has probably been brought to the spot by glacial action. Fine specimens of agates and jasper are found at various points on this coast, but, unfortunately, from the severe treatment they have been subjected to, they frequently have flaws and cracks in them. Here and there on the sandy parts of the beach we see a low-growing plant with glossy leaves and greenish-yellow flowers, the sea purslane. Its chief interest lies in the fact that it is found only on the sea shore. Close to it grows a plant which was once of great commercial value, the saltwort. It was collected in very great quantities along with some other sea-shore plants, then dried and burnt, and the ashes formed the *barilla* of commerce. The plant, being one of the oldest chemists in the world, extracted its soda from the sea water, and our own chemists got their soda from its ashes, the barilla. The chemists of to-day, however, have learnt wisdom from the plant, and make their soda direct from salt, and so the trade in barilla has become a thing of the past. The plant is very succulent, and is armed with strong spines, and altogether is likely to arrest the attention of even a careless observer. On all the grassy banks on this coast there are millions upon millions of the primrose, as well as its near relation, the cowslip. The great poet Goethe was one of the first to point out that all the parts of the flower are changed and altered leaves, and on one occasion we saw here a specimen of primrose which confirmed this view in a very striking way. The calyx, instead of having the usual sharp-pointed sepals, was made up of five ordinary leaves differing only in size from leaves of the plant! The cowslips, though not quite so abundant as their more modest relation, are in great numbers and perfection, and afford plenty of scope to anyone who wishes to verify Darwin's observations. N.B.—You can only verify, you cannot controvert any of the observations of the master observer. It is somewhat different with his theories: they are passing, like all such things; but his observations are for all time!

We are now close to famous Pease burn, or dean, a place where, as Oliver Cromwell said, "one man to let is better than ten to make way." But the place is very quiet to-day, even the memory of his guns having died away. Just as we came near it, a dipper flies along, and suddenly stopping its flight, stands bobbing on a stone in the stream. Its nest is on the face of a bank not far from the bridge, which, of course, every visitor must see. Passing the Alders ("Allers") which haunt the banks of most of our streams, and from the wood of which some of the Protector's gunpowder was made, we come to the mill, with

its quaint old-world garden, and crossing the plank bridge near at hand, soon strike the footpath, through the Whins, leading to the bridge. However, as naturalists, we object to the beaten tracks of life, and wander at our own sweet will up the stream, looking for the great prize of the place, the fern (*Polystichum angulare*). We can remember the time when this was the only locality in Scotland for a plant which is far from rare south of the Tweed. Now the work of some of our botanists has extended our knowledge of it, but even yet it must be looked on as a local plant.

Once, in the days of auld lang syne, we, along with a friend, got a superb crested form of the plant, still in cultivation, but that was a red-letter day! Fortunately the plant grows along with the more common species, which, let us hope, will help to protect it.

On the banks we also see the lovely shining green fronds of the hart's-tongue fern, which now and then produces some curious varieties. The holly, with its never sere leaf, is growing in places out of the rifted rock, and the old but small oaks are in some cases so engrafted with the rock that at a little distance it is hard to distinguish between them. Close by is a plant of the spindle tree, once much more common in Scotland than now. The flowers have little to attract the eye, but in autumn the lovely waxen fruit, with the curious appendages to the seeds, is often taken for the flower by superficial observers. The pale flowers of the woodruff glitter through the bushes, and the whorl of dark green leaves remind us of how the plant got its old-world name. The hanging stems of the ivy are yards in length, and are quite strong enough to serve as a rope if such is needed, while its fruit is abundant in many parts of the glen. And then a sudden turn in the stream and the famous Pease Bridge is before us. It is hard to say if it is more impressive from above or below. From the latter point of view, we observe that the structure is doomed to perish from the rapid weathering of the stone. It will certainly never stand as long as the very old one in the Lower Dean, which some say is Roman.

Meantime the Pease Bridge has a very large and lively population of jackdaws, and as we watch them a flash of yellow light, and a pair of the graceful yellow wagtails fly past and are now jerking their tails by the side of the stream. Not far off, in a sunny spot, we see the ringlet butterfly in quantity: it is by no means so common with us as in the south.

As time and tide wait for no man, we must get up the bank to the footpath through sheets of the wood anemone, noting as we climb the graceful melic grass, and then, keeping by the footpath for once in our lives, walk down to the seashore and on to the shingle bank, where many of the stones are agates or jaspers. If we are in luck we may find on some parts of this coast the curious and interesting oyster plant with its pink then blue flowers, its glaucous leaves, its "ancient and fish-like" taste.

This is a curious plant in many respects. It may be found one season at the east end of a bank of shingle, and some time afterwards at the west end, and again it may be intermediate. Once we had the good fortune to get it in a place where it had been collected by the great Ray, and where in the interval it was thought to be extinct. The sea may pile tons of shingle over it and we say it is lost, and then in a night the overloads are gone and the plant flourishes exceedingly. A branch of the plant is sometimes broken off, dries and shrivels up in the sunshine, the calyx meantime contracting over the fruit: then the wind blows it away over the bank, a shower of rain falls, the calyx relaxes, the fruit or nut falls out, and dropping into far from fruitful soil, but which is fit for the needs of the plant, germination takes place, and we have a new plant far, often very far, from the old one. Quite close to our last plant we find another relation, the bugloss, but it prefers the sand to the shingle, and does not seem to mind if it grows on the shore or inland, provided it gets a light soil. The bright blue flowers make it very attractive to look at, but the strong, rigid, and perhaps poisonous, hairs make it unpleasant for some folks to handle.

Presently we come on one of the handsomest of our grasses (*Elymus arenarius*) growing sometimes between four and five feet high, with its broad leaves and pale-coloured spike. On a bank we see one of the largest of our peaflowers, the wild liquorice, as it is called in some places, with its strange, infolded pod, and on the short thyme-covered turf we find the more common species (*Astragalus hypoglottis*), with its beautiful light purple flower-heads. Near at hand we also see the splendid flowers of the bloody cranes-bill (*Geranium sanguineum*), which from its mass of colour may often be seen at a great distance. On the same ground is growing the dwarf Scotch or Burnet rose, with its large creamy-white flowers with their crimson blush, "love's proper hue," and the small compound leaves with frequently a tinge of purple copper on them. Later in the season the plant bears a round, almost black fruit, or hip, to use the old Saxon word.

As the tide has now gone out, we go down to some of the rocky pools rich in fine seaweeds and other spoils of the ocean. Soon we see a bright-coloured ball moving from the shade of a large tangle. It is that most interesting animal, the common sea-urchin, with its plated armour and its offensive (?) spines. Some folks think that the spines help the creature to move forward, but we rather think that they are used to prevent retrogression. The long and delicate suckers are protruded until they are fixed on a rock or stone, and then by a sudden contraction they drag the body forwards, the front spines being raised and the back ones depressed so as to act as a prop, but the whole animal is so curious that one might well spend weeks of study on it instead of a passing glance.

In places the small caves in the rocks are filled with stalactites

and stalagmites of carbonate of lime formed by water charged with carbonic acid dissolving the lime in some of the rocks, and then on evaporation the lime is left in the solid state, depending from the roof or covering the floor. Here and there we find plants of that lovely fern, the sea spleenwort, with its fresh, glossy fronds contrasting with the bright golden tint of the fructification. It never in this part of the world attains the size it does in the south and west. On the same rock we see the sea wormwood, one of the prizes of the day, a relation of the common wormwood. In former days Berwickshire, like many other places, must have been much more densely clothed with wood than now; and we see a relic of that old time in the aspen growing out of the cliff, with its leaves twinkling and trembling in the sun. One of our old ballads, in describing utter stillness and quiet, the stillness of death, says, "the aspen grey forgot to play, and the mist clung to the hill." It is seldom given to any of us to see this, but it is true to nature all the same, and proves that the unknown composer of the song was one of the high priests of Nature.

In the rock we observe now and then rough nodules of the magnetic oxide of iron, very probably with a trace of titanium, but that can only be determined indoors. In due time we stumble on the curious little harbour of the cove, which suddenly comes into view like a transformation scene, surrounded by cliffs on every side, many of the rocks being of most fantastic forms, carved out by the storms of ages; and the first thing the stranger asks himself is, how did the people get in and how am I to get out; for it would tax the grit of the best climber to find a way up the cliff. However, we come in due course to a solution of the mystery. Taking advantage of a sea cave, the natives of a former age have bored through the cliff, which is an easily worked sandstone, and the cart-road now passes down through the rocks and on to the little harbour, the only one on a long and dangerous line of coast. Climbing up we see daylight again, the blue sky, the primroses glittering in the sun, the long line of iron cliffs, the merciless foe of many a gallant ship, and the "unbeginning, endless sea," to-day an emerald, to-morrow black as the robes of Fate herself! Presently we came on a multitude of the Burnet moth in its dark green velvet mantle slashed with crimson silk, and close by on the stems of the grass its curious paper-like cocoons from which it has only recently emerged. Indeed, if you only pause to observe, you may see its first introduction to light and air. Meantime, as man is a feeding as well as an observing animal, we may take our lunch, for somehow the sea air helps to remind us that lunch time has passed long ago.

Having learned something of the life history of the Burnet as well as helped our own, we "make tracks" for the long reefs and ledges laid bare by the sea. In some of them we may see the work of the strange pholas, and if you can keep silence in your

own, or, indeed, any other language, you may even see the worker at his work. No one who is capable of judging can observe the work without being convinced that the action is a purely mechanical one, and that the idea of some chemical solvent is a "fond thing vainly imagined;" indeed, no chemist would maintain it for a single moment. We have not as yet found the "universal alkahest." Here and there on the cliff we observe a very curious sight, one not to be seen in every day's walk. In the very damp places we see lovely cushions of bright, fresh-looking moss, one of the Hypnums: when we get close to it, we see that the moss has in the lower part been changed into stone, which, however, retains all the external structure of the plant, only the extremity of which is growing. In the course of ages this forms a great mass of calcareous tufa, which might be mistaken for a mineral but for its organic form. In this case the plant helps in the deposition of the carbonate of lime by withdrawing the extra carbonic acid. In the case of the formation of the stalactite, the water and the carbonic acid are removed by evaporation. This is an example that nature attains the same end in different ways. Close by we see splendid specimens of the marsh marigold, the "winking, Mary buds" of Shakespeare. This plant is found from the seashore up to near the top of our highest mountains, as Ben Lawers, &c. At low elevations it has many stems and many large and handsome flowers; on the hill-tops it has only one stem and one flower, with all the parts of the plant small in proportion, so small, indeed, that it is called "minor," though there can be little doubt that the difference is due to the changed circumstances. We cannot hope to understand either plants or animals unless we know and take into account the surrounding conditions. Alongside the marigold is another of Shakespeare's plants, the cuckoo flower, with its handsome pale lilac-coloured flowers. This plant, common in wet places, sometimes assumes a very strange form. Instead of the pistil ending the axis, the latter is prolonged and produces another flower, and that again is succeeded by other flowers, until we have, perhaps, six or eight one above the other, reminding one of what gardeners call "hose in hose."

In places on the coast we find the curious horned poppy, with its handsome, much-cut, glaucous leaves and bright yellow flower, and its long horned fruit, so different from the common idea of the fruit of the poppy that few, save the botanist, would take it to be one of the order.

On some of the green banks we see the large white flowers of the granulated saxifrage, with the curious granules at the base of the root leaves. This plant has a very close relation to one of the rarest of our native plants, the *Saxifraga cernua* of Ben Lawers. In the wet ground near at hand we see the pink flowers and hairy stem of the marsh sedum (*Sedum villosum*); alongside is growing the common butterwort, with its imperial purple flower,

purple in this case, though the colour varies from blue to the aforesaid tint. Darwin and others have shown that this is one of the insectivorous plants, the leaves being covered with glands which give the crystalline appearance so marked when the light strikes on them. The glands have the power of digesting the animal matter which is brought in contact with them by the incurving of the leaves. Another curious fact connected with its life history is that it forms a resting bud during the winter, which may be compared to a small onion which, on the return of mild weather, develops into the full-grown plant.

The banks are covered in places with bushes of the "ling-long yellow broom," but in this case the flowers are, many of them, of a deep rich orange, a colour quite unlike the normal tint of the species. In some of the sandy fields the common weed is the Venus comb, with its small white flower and its long queer fruit ("Shepherd's Needle"), unlike most in the order. It is strange how rare this plant is in many of the western counties, though by no means so in these on the east side of the country. Another interesting relation is the sweet cicely, with its sweet, rather richly aromatic, odour, not unlike that of aniseed. To some of the English botanists this is a rare plant, but in mid-land Scotland it is certainly not so, being in some districts the most abundant plant of the order.

The light warns us that it is time to return to the station, and in doing so there is just time to pick up the handsome and interesting musk mallow, with its large pink flowers, its much-cut leaves, and its strong odour of musk. In the foregoing we have noted a few of the countless objects of interest in a district which well deserves a visit from strangers, but which, thanks to the railway company, is hard to win at.

THE GREAT BUSTARD AND ITS REINTRODUCTION INTO ENGLAND.

AN attempt has been made to reintroduce the Great Bustard (*Otis tarda*) into some of the districts of East Anglia, where it was formerly abundant, and we most sincerely hope that this attempt will be successful.

The great bustard, which was the largest of British land birds, was formerly found in the open country districts from East Lothian to Dorset. According to W. Howard Saunders ("Manual, British Birds"), "until the year 1526 the great bustard used to breed sparingly as far north as the flat portion of the Lowlands on the Scottish side of the Border; and southward, it was common on the moors, extensive downs and plains of England to the Channel. Enclosure, the planting of trees and the increase of population, contributed to the gradual diminution

of its numbers, and it passed away, unrecorded from Berkshire, Hertfordshire, Cambridgeshire, the Wolds of Lincolnshire, and the Downs of Sussex; while the first ten years of this 19th century saw the extinction of the birds indigenous to Salisbury Plain. On the eastern Wolds of Yorkshire the survivor of former droves was trapped in 1832-33; and in Norfolk and Suffolk the last fertile eggs were taken about 1838, though a few birds lingered to a somewhat later date."

The distribution of the bustards is confined to the Old World, the bird so-called in parts of the North-American Continent is the Canada goose (*Bernicla Canadensis*). The great bustard is at present found in Central and Southern Europe, being met with in Hungary, Germany, Poland, and Spain. It extends eastwards to Turkestan and North Afghanistan and is sometimes found in the north-west of India.

A few words as to the general appearance of the bird may not be out of place. The general colouring on the upper parts is sandy-rufous, with broad transverse bands of black, the tail being similarly banded, while the tail feathers themselves are reddish and tipped with white. The top of the head is light grey, as also are the sides of the face, ear-coverts, cheeks and throat. On each side of the chin are elongated bristle-like feathers. The legs of the bird are relatively short and its wings are rounded.

The male great bustard measures about forty-four inches and stands between three and four feet in height; the female is a great deal smaller and is coloured much the same as the male. Like other members of the bustard tribe the male bird has an air pouch opening under the tongue which extends some way down in front of the neck. This air pouch is much developed in the breeding season, but at other times of the year is barely noticeable.

The behaviour of the great bustard in the breeding season is most remarkable. The following observations I was fortunate enough to make in 1897 when a male and two females were living in the Zoological Society's Gardens, Regent's Park, in one of the enclosures near where the new ostrich house now stands.

The male bird begins his "showing-off" by standing in front of the female and repeatedly takes two steps to the right very quickly and then one or two to the left, but moving hardly any distance, quivering with excitement the whole time. The wings are half opened and drooping to the ground, the primary feathers falling loosely out of place. The head is buried in the throat and the tail turned up on to the back, the hind part of the body being pitched well up and the "whiskers" displayed. The pouch under the throat is enormously distended, the chestnut colouring on the crop being conspicuous. The female meantime walks up and down and appears not to take much notice of these antics—for such they are. Presently the male turns round quickly to show off the white of the tail coverts on the other side as an

alternative attraction. These antics will last some fifteen minutes when he gradually assumes his normal appearance. There is a remarkably fine specimen of the great bustard mounted in the Natural History Museum, South Kensington, and faithfully represented as "showing-off" to the females. At the present time, unfortunately, there are no living specimens in the Zoological Gardens, the male above referred to having died some time ago. The two females also died, one before last Christmas and the other since. One of the birds living in the Gardens in 1895 laid two eggs, but as far as is known, the great bustard has not reared any young birds in captivity. Representatives of the bustard group now living in the Gardens are the Caffre bustard, a very handsome species, and the Denham's bustard, a much smaller bird.

The Norfolk and Norwich Naturalists' Society issued a circular in the autumn of last year, together with a letter from Lord Walsingham, to the effect that an attempt is being made to reintroduce the great bustard in what was formerly one of the favourite haunts of this fine bird on the borders of the Norfolk Fens. The effort is due to the public spirit of an English gentleman, resident abroad, whose love of natural history has induced him to incur considerable expense and trouble in the matter. It is hoped that residents in Norfolk and Suffolk will agree to respect the birds which were at large at the time of the issue of the circular, and by preventing their destruction will secure the success of an experiment to which the re-introduction of the capercailyie into Scotland affords a parallel instance and an encouraging precedent. The Hon. Secretary of the above Society kindly informs me that it was decided to allow the bustards a run of 400 acres, to be increased to 800. Sixteen birds arrived quite safely, but their wings had been clipped, so that it would be some time before they could take long flights.

The part of the country in which the birds are turned out is where the oldest inhabitants still remember the existence of a flock of from thirty to forty which used to breed there. It is understood that the gentleman who sent the birds over will send a few more each year for some years, so as to give the experiment a fair chance.

It only remains for us to say again, that we sincerely trust this reintroduction will become a complete success, and that we may in years to come be able to include the great bustard in the British List as an almost indigenous species—though it has for so many years been absent, except for the occasional appearance of a few individuals.

Basil W. Martin, F.Z.S., M.B.O.U.

THE WEASEL.

RAMBLING about Epping Forest, I have on several occasions come across the weasel, but generally I have had nothing more than a passing glance. As I am now the happy possessor of a live male specimen, I have had a better opportunity of studying it more closely. He was captured June 20th, Accession Day, and so I gave him the name of "Vic." As he was then in his youth, being about half his mature size, it was perfectly safe to handle him, and so for the first and only time I took him in my hand, as I have never dared to take such a liberty since. For his reception I hastily constructed temporary quarters of wood and perforated zinc with glass frontage, the dimensions being thirty inches long and ten inches wide, and the same deep. As this proved to be inconveniently small, I soon made him a larger dwelling on the same plan, but of increased proportions in each direction; and still I was not satisfied, as it was far too small to give scope to the wonderful activity of my little captive, and so I have now built him a third and permanent residence which is quite noble in proportions, being four feet long, the same in depth, and one-and-a-half feet wide, having a sleeping compartment near the roof approached by a ladder of four steps and the whole frontage being of glass, and so my little friend is now apparently very happy.

The whole upper part of his body, including the tail and legs, is reddish-brown, and underneath, from the chin to the root of the tail, is pure white, and his short legs are covered with hair to the end of the toe-nails. As I always keep him provided with plenty of clean straw, I do not find him by any means an offensive animal. His sleeping compartment I also keep crammed full of straw, but however much I may put in he will wriggle through it with ease. During the day he sleeps about half the time, and seems to take a special delight in reposing in every conceivable attitude it is possible to twist his serpentine body into. I believe he sleeps through most of the night, as I have seldom seen him about after dark; when awake he is full of activity and scarcely ever still for a single moment. For rapidity, combined with grace of movement, I should imagine he is unsurpassed by any other animal; he will rush about with lightning speed, performing a variety of gymnastic performances on the horizontal bars placed for that purpose, of which he makes free use. He will turn with ease in a space no wider than his own body. At times he will dance about in high glee, evidently on very good terms with himself. There are two distinct sounds which he utters, one a kind of whistle which is a sign of pleasure, the other somewhat like the squeak of a mouse as if in pain, but which is not often heard.

Being entirely carnivorous, I have to provide him with fresh meat, which consists mainly of raw beef or mutton, varied with

a live sparrow about twice a week, and a mouse occasionally. He will not eat cooked meat or even raw egg. Vic says he much prefers a sparrow, as he thoroughly enjoys the sport of killing, and from a weasel's point of view a sparrow is evidently a great luxury. When given to him, he will pounce upon it instantly, catching it by the neck, when death is invariably almost instantaneous. He will then play about with it for a short time like a cat with a mouse, carry it to his sleeping-room, bury it in the straw, and eat it at his leisure. The next that is seen of that sparrow are a few feathers only, all the flesh and bones having been completely devoured. He has a very respectable appetite, and in the course of a day will consume solid flesh equivalent to about half his own weight. Although he resents being handled, he is otherwise quite tame, and will take food out of my hand and allow me to stroke him; but if I attempt to take hold of him he will instantly show his formidable little needle-pointed canines and dart at my hand. He appears to enjoy the hot weather more than the cold. Whether he will survive the severe winter weather in captivity is a problem yet to be solved. I trust he will.

NATURAL HISTORY NOTES AND QUERIES.

Provincial name of the Heron.—In reply to the Rev. A. F. Curtis's inquiry in NATURE NOTES for April (p. 65) it may be worth mentioning that an old Suffolk farm labourer of this parish, now dead, used to speak of herons as "Old Frankies," and it would I think be hard to find a word giving a better imitation of the loud harsh scream of this bird than "Frank" or "Hank." "Harnser" is however the name by which the heron is generally called in East Suffolk.

Blaxhall, Suffolk. G. F. ROPE.

Robins (page 73).—Mr. Westell is right in supposing that robins are exceedingly pugnacious and most inveterate fighters, and I think he may safely conclude that they fight much more amongst themselves than with birds of other species. He must have been very unfortunate not to have witnessed a robin *v.* robin fight in all his rambles. I believe they quarrel most at the end of the moulting season, and after a time they seem to find their own level, and each bird occupies a territory, as it were, of its own. If one robin intrudes on another's domain it is furiously chased away, but other species of birds are ignored. The myth that the young robins kill off the old ones is an old woman's tale, and is too ridiculous to be given a second thought. It must be patent to any thinking person that when a battle takes place the *strongest* bird kills or vanquishes the *weaker* one, irrespective of age. It is the fittest that survive.

But as regards robins fighting with each other, the fact is proved by the experience of aviculturists, as it is found practically impossible to keep two robins together in a cage or aviary for any length of time. There are numerous instances recorded which go to prove the fact, but I have not got them just at hand, or would quote a few. I have, however, kept robins myself, and also reared them by hand, and my experience fully coincides with these records. When reared by hand, as soon as they can fly, if kept in a large cage or aviary, or allowed to fly about a room, they frequently indulge in playful skirmishes, but when the moulting season arrives, the red plumage no sooner begins to appear on the breast than these skirmishes become pitched and bloody battles, and it is no longer possible to keep two birds in one cage. This is my personal experience, and I consider it goes to prove that robins *do* fight with each other when wild.

6, *Askew Bridge Road,* CLAUDE ST. JOHN.
Gornal Wood, Dudley.

Robins Nesting.—I think a unique instance of robins nesting in the most out-of-the way places occurred here a few weeks back. The windows of a certain library here were left open, and in a short time the attendant noticed that two robins came and went continually, and after a while commenced to build their nest on the top of a shelf which they in due time finished. Then on accouut of their making such a mess, the attendant put the nest into a flower-pot and carried it into the garden while the two birds looked on. They went to the nest immediately and there were some eggs laid, but on one of them being broken the birds deserted.

May 18, 1901. A RUGBY SELBORNIAN.

The Robin and its Young.—At the Bradford meeting of the British Association it was stated that it was unknown "how long the commonest English birds sat upon their eggs before hatching them" (*Report*, 1900, p. 586). On the 28th of April three eggs were seen in a robin's nest, built in my vinery; on the 10th of May six birds were seen to be hatched in it, and on the 21st all had left the nest, and all but one had flown from the vinery. Presuming that the rest of the eggs were laid, and that the robin began to sit by the end of April, she must have sat for ten days, and fed her young for eleven days before they flew. On the 21st the father and mother were sitting side by side on tree near by, probably well content with the result of their labours. The absence of more precise information is due to my desire that the robin should not be disturbed, even by any one looking into its nest. It got into and out of the vinery through a small opening in a broken pane of glass, fortunately too small to admit a cat.

Weetwood, Watford. JOHN HOPKINSON, F.Z.S.

The Hoopoe in England.—In reply to Mr. Aplin, I can say that my authority is my father, who used to say hoopoes were very common when he was young, that is about one hundred years ago. According to Rodd's "Birds of Cornwall" they certainly were common, but as they were always shot and called *specimens*, they have disappeared of course. If they came, which they certainly did, why should they not breed? The same with the oriole. One was seen in Cornwall the other day. What chance have we of seeing them as long as stupid people shoot and stuff? It is not science, or ornithology, but ignorant vanity.

W. F. COLLIER.

Redpoles. — Some redpoles made their nest in a low box-bush in our garden this year—a pretty little nest, made with moss and wool and grass stems, and lined with some sort of down. There were five eggs laid, and they were successfully hatched and reared. Some few days before they flew the male bird used to sit a little way from the nest, and sing his sweet little song. The eggs were pale blue, spotted with reddish brown.

Foxton Vicarage, Cambs., A. M. GREENWOOD.
June, 1901.

Mountain Finch and Beech Nuts.—These birds, probably the most beautiful of the finches, are to be seen daily in my garden. One New Year's Day I had a fine view of two of them from an upper window as they were on the ground below, the sun showing out their lovely plumage to the greatest advantage. They are especially fond of beech nuts, and feed, in company with chaffinches, under a fern-leaved beech in front of my study window. The crop of beech nuts last year was the greatest in my memory, and as I believe the trees do not bear continuously, there is a likelihood of a dearth of them for the next season or two, if not longer.

Market Weston, Thetford. EDMUND THOS. DAUBENY.
January, 1901.

The Fishing Eagle (osprey, or as here called, *milan*).—My brother, who is a constant writer in NATURE NOTES, told me that some forty years ago, when at Geneva, he had watched this interesting bird on the lake. Consequently I have been looking out for him lately and have seen several of the species at work. But it was only yesterday that I obtained the close observation that I wished for. There is now much water running down from the *Gorge du Chauderon*. Passing by the mouth of the stream last evening I paused to watch an Italian fisherman with long rod, taking out small fish the length of the middle finger. Presently a

fine osprey came along, and I saw him swoop down and take several fish. It was evident that he ate the fish whilst flying, but I could not absolutely see this. I waited my time, and it was not long. This grand bird soon took his fish within fifteen yards of where I was standing, in the claws of the left foot, and, bending down the head and advancing the foot, I saw him devour his prey on the wing. Of course if he had taken a large fish he would have had to land to make his meal off it. There is a splendid picture of this latter scene in a publication on "Natural History," I think of Cassell's, but I have left my copy in England. I shall hope one day to see a large fish taken, and if I do will send you an account of the struggle between bird and fish. The gulls (*mouettes*) have left us, and are no doubt nesting in some more secluded locality than this, not far from the water. I think I know where to find them, and as soon as I do will write you further. These birds are exceedingly tame here in the winter, and people feed them by throwing bread to them which is taken flying. The food is also taken flying from the hand. I miss very much the golden eagles that I used constantly to see here twelve years ago, and two of which I once met quite close when fishing in the Rhone valley. They were feeding on a dead lamb. Of course these are dangerous and destructive birds, and I expect that their stronghold above Aigle has been successfully stormed by man.

Montreux. GILES A. DAUBENY.
April 27, 1901.

The Sparrows in Hyde Park.—Visitors to Hyde Park are pretty well acquainted with the sparrows and pigeons there. About three weeks ago, while strolling through the Park, an incident occurred that highly amused me at the time. A gentleman who was feeding some sparrows with bread-crumbs was evidently pleased with his innocent occupation, for now and then he would throw the crumbs up in the air, and the sparrows caught them before they reached the ground. Not contented with this aerial display of nimbleness, one of them had the audacity to perch itself on the gentleman's hand and helped himself to the crumbs, while his mates had to be satisfied with those that he dropped.

2, *Canonbury Place.* CHAS. E. J. HANNETT.
July 9, 1901.

Rooks.—In reply to Mr. Charles Bethell's note, I know for a fact that rooks have left a rookery when the young birds have not been shot down, but as to whether that was the cause of the birds so doing it is extremely difficult to say. Rooks will desert their nest trees because (apparently) of the trees decaying, but the former incident seems inexplicable.

July 5, 1901. W. PERCIVAL WESTELL, M.B.O.U.

Do Cuckoos suck Eggs?—It has been denied and thought ridiculous that cuckoos suck other birds' eggs, but an incident which came under my notice during the spring of this year leaves very little (if any) doubt that cuckoos do sometimes suck the eggs of other birds. When going across a field in the vicinity of Northwood along with an ardent naturalist friend we found a thrush's nest which contained three eggs. On our return journey, half-an-hour afterwards, we observed that the old birds were making a great commotion (like birds do when a cat or a hawk is about), and at the same time a cuckoo flew out of the bush which contained the nest, and settled on an oak tree close by. Our suspicions being aroused we again looked at the nest, and found all the three eggs broken, and their contents gone. Each of the eggs had had a hole made in the side as they lay in the nest, not smashed, but exactly such as anyone would expect to be made by a bird's beak. I took the nest straightway and have preserved it along with the eggs as they appeared at the time. I may say that on two previous occasions I have found eggs (thrushes) pierced in the same way.

41, *Heath Street,* JAMES E. WHITING.
Hampstead, N.W.,
August 13, 1901.

Habits of Cuckoos.—Is it likely that a cuckoo will visit the same district year after year when it returns to this country? The following fact leads me to conclude that such is the case. In April, 1899, two or three cuckoos were daily seen in the trees about my garden. One had a very peculiar note, the second syllable of which was very hoarse, just as if it had a bad cold. The effect was somewhat ludicrous. The following year, April, 1900, the cuckoos arrived as

usual. I had forgotten about the bird of the previous year until the maid said one morning that there was a very strange cuckoo in the garden, it seemed as if it had a bad cold. I went out of doors to listen and instantly recognised my hoarse friend of the year before. I am awaiting the arrival of the cuckoos this spring with interest.

West Monkton, Somerset. JULIAN K. BRINKLEY.

Hen killing Hawk.—A friend of mine who lives at Frithville, near Boston, Lincolnshire, had a hen with her brood in a coop a short distance from the house. One day recently, hearing a commotion among the chickens, she ran out in time to see the hen beating and pecking a hawk to death. I was shown the hawk, which, I am sorry to say, proved to be a female kestrel. The victorious hen is a light-coloured ordinary barn-door fowl. Fortunately the coop had been raised far enough to allow her to get out.

Herne Hill, S.E., W. COCKSEDGE.
August 10, 1901.

The Hours at which the Nightingale Sings.—I have been trying to make out how many hours out of the twenty-four the nightingale continues singing. My first observations were made on May 15. At 8.30 p.m. the one that I had singled out was singing. At 10.15 p.m. it and all the neighbouring nightingales were silent. At 10.40 my bird and others had begun. At 12 (midnight) my bird and others singing. 1.30 to 1.50 a.m. (May 16) all silent. At 3 a.m. a Babel of music in which, I think, all the nightingales took part. A large number of blackbirds, thrushes, robins, several cuckoos and larks were singing, each without a moment's pause, if the cuckoos are excepted. No doubt many small birds whose notes were hardly distinguishable took part in the chorus. At 3.45 the songs of all the species just mentioned were represented, and wrens, garden warblers and whitethroats in addition. At 3.55 the nightingales were still vigorous, and the chiffchaff, willow-wren and chaffinch became audible. 5.10 a.m., weather cold and chill, only one or two nightingales singing and not my bird. Even those that made music left intervals of ten minutes or so. At 6.18 my nightingale woke up, sang one strain and subsided. At 6.30 other nightingales began to sing more vigorously. At 7.45 all the nightingales silent. At 7.56 one begins feebly. 9.30, all silent but for one solitary snatch of song. 11.20 to 11.40, sunny and warm, but only a stray note of nightingale's song is to be heard. 1.20 p.m., occasional singing. 4.30 p.m., my bird singing occasionally, others silent. 7 p.m., nightingales singing vigorously.

I have supplemented these observations to some extent and have called in the help of the college watchman. He reports that on one warm night (May 20-21) the nightingales sang from 10 p.m. all through the night without intermission. One rainy night (May 30-31) all the nigh ingales were silent till 1 a.m. when one began. All seem to take a rest between 9 and 10 p.m., breaking into song sometimes a little before 10, but often not till some time after. On the nights of June 3, 4, 5, 6, singing was general among the nightingales from 10 p.m. till dawn, but on June 6 and 7 only one bird was heard between 12 (midnight) and 1 a.m.

To sum up the results of these imperfect observations, all the nightingales take a rest between 9 and 10 p.m. before making their great effort. Sometimes they take a rest in the middle of the night, but by no means always. In the day nightingales are generally to be heard at any time, but not all sing at once.

Haileybury. F. W. HEADLEY.

Toads.—As to toads being venomous, Shakespeare appears to have been right. In "Chambers's Encyclopædia" I find this, "Though toads cannot spit poison, the secretion of their skin glands contains a poisonous substance (phrynin) acrid enough to be felt on tongue or eyes, and probably conducive to the safety of toads." . . . . . "A really venomous toad is found in the Argentine Republic" (see "Hudson's Naturalist in La Plata," 1892). This question, however, seems to have been not long ago an open one. In Wood's "Popular Natural History" we were told how harmless and useful toads are, and how Mr. Wood's children had large tame toads which they carried in their hands

round the garden to feed on insects found on the flowers. And if we turn to that beautiful book which is the fountain of our existence as Selbornians, our Master directs us thus: "It is strange that the matter with regard to the venom of toads has not been yet settled. That they are not noxious to some animals is plain, for ducks, buzzards, owls, stone-curlews and snakes eat them, to my knowledge, with impunity."

The Toad in the Hole question was once taken up in Oxford by my cousin, Dr. Giles B. Daubeny, F.R.S. (who died in 1867), Professor of Chemistry and Botany in the University. He had a number of toads enclosed in hermetically sealed boxes and buried, in the presence of witnesses, in the Botanical Gardens. After some months the boxes were taken up, but I forget with what result. I think all the toads were dead; perhaps some of your readers can remember. Dr. Daubeny used to visit at my father's house, and I have there listened to him discoursing on many subjects. On one occasion he produced a letter he had received from his friend Darwin, who had just published "The Origin of Species," turning men's thoughts in a new direction—imperilling the very foundations of religion, as some feared, but which Darwin denied in the letter—and ushering in that era which, as German philosophers tell us, will be known to posterity by one name only—the Darwinian. I do not remember, however, having heard my cousin speak on toads.

My own experiences of toads are these. When young I was told that if you spat at a toad he would spit poison at you. I often tried the experiment, but without success. I have always felt a disinclination to handle toads: however, I have done so, but never would if I had a cut in my hand. I have noticed that if a dog incautiously seizes a toad in his mouth he always drops him "like a hot potato." Toads are most useful when in their proper place, and whenever, during my very wandering life, I have been the happy possessor of a kitchen garden, I have taken care to have some toads in the strawberry beds to eat the slugs. They can be troublesome however. When I was living at South Brent, in Devonshire, I had a small stream running through my garden, part of which I had enclosed for the purpose of rearing young trout. Toads would get in here to deposit spawn, and I had to take numbers of them in my landing net and remove them to other water.

Toads sometimes make interesting migrations soon after birth. I have noticed this on several occasions, two of which at this moment occur to my memory—once when I was walking in the *Carlsam* at Carsel, in Germany, about ten years ago, and again last year at Southbourne in Hampshire. On passing along the road through woods in both cases, there were myriads of small toads—so many that I could not help killing some each time I put my foot down—about the size of the finger nail on the ground, and marching, if I remember rightly, all in one direction across the road. The toads were all gone next day and must have furnished a fine meal for nocturnal animals and birds. I should be glad to hear the meaning of these migrations. Unfortunately, I did not take note of the state of weather or direction of wind when they took place. I must take care to do this next time.

I can only remember once having seen a toad being eaten. This was some forty years ago. I was walking through the fields in Somersetshire, and on getting over a gate I found in front of me a large green snake holding on to a big toad, and, singularly as it seemed to me, trying to swallow him; one of the toad's legs was down the snake's throat. The toad appeared to have been bitten in several places, bubbles protruding through the wounds. I at once killed the snake by hitting over the back with my stick, and, after examining the toad, put him out of misery under my heel.

Frogs are well known to be excellent eating, being much appreciated by the French. I am now sorry I did not call for a dish of frogs when in Paris last week, as I could then speak from experience. It is said that if a man has missed his breakfast he can satisfactorily make up for it by letting a frog jump down his throat. I should not mind trying this if the necessity arose, but I should fear that breakfast off toad would bring indigestion, if not further trouble. Still I have no doubt that toads have been and are eaten by man.

Shakespeare tells us that the toad, though ugly and venomous, wears yet a precious jewel in its head—of course referring to the eye, which is specially bright.

I have generally discovered the presence of a toad by seeing his eye shining in a dark corner, before I could distinguish his body from the soil surrounding him.

Mr. Toad is ugly no doubt, but he is a "dear chappie" for all that, and a not inconsiderable factor in the economy of Nature.

Montreux, GILES A. DAUBENY.
May 27, 1901.

The "Venomous" Toad.—In reply to R. F. Martineau, with regard to birds being poisoned by eating toads, I may mention that in Step's "By Vocal Woods and Waters," there is a chapter called "About my Toads," in which the author recounts the bad effects on a young jay in his possession from eating young toads, and also the case of a tame heron having died from swallowing a toad, although the reptile was vomited almost as soon as swallowed.

I once saw a hedgehog make a meal of a toad in my garden without any bad after effects, but a puppy which foolishly took a toad in his mouth dropped it at once with a wild yelp, and the blisters on his lips and tongue lasted for several days, interfering with his feeding considerably.

Normanton, CHAS. FORAN.
Elm Grove, Southsea.

Adders Swallowing Young (p. 75).—Although I have nothing very practical to add to this subject perhaps I may be allowed the following remarks. I have long been familiar with the assertion that these reptiles permit their young to take refuge within their bodies, but I have never come across anything which I could regard as perfectly trustworthy information. Mr. Westell undoubtedly has very good reason for accepting the *bonâ fides* of the persons he quotes, still, without questioning the veracity, I think the second instance he quotes seems a little highly coloured—at least it appears so to me. Now, speaking physiologically, if it were the habit of the adder to admit its young down its throat in times of danger, one would expect to find that Nature had provided a pouch or receptacle to receive them, just as is the case with the opossum, which has been quoted, the kangaroo, and other pouch-bearing animals. To suppose that the young adders enter the stomach of the parent, to be treated to a bath of digestive juice, appears unreasonable. But my object in writing is principally to draw attention to the substantial reward which has long been, and, I believe, still is, offered by the *Field* for absolute proof of the fact. The conditions are, as I understand them, that when an adder has been actually seen to swallow her young it must be killed, a ligature placed securely around the throat to prevent the young ones escaping, and the dead body packed with grass in a wood box, and sent at once to the *Field* office, with full particulars. Seeing that adders are by no means rare in some parts of the country, it has often been a matter of some surprise to me that this evidence has not been forthcoming, as it would at once place the matter beyond all dispute. The snake-catcher of the New Forest has also occurred to me as a likely person to supply such evidence, especially as the reward would probably be much appreciated by him. Doubtless he would gladly do so if the matter were brought to his knowledge.

Askew Briage Road, CLAUDE ST. JOHN.
Gornal Wood, Dudley.

Wasps' Nest.—At the Old Hall, Stackhouse, a wasps' nest has been built in a corner of the kitchen window, up against the glass. It is quite easy to watch all the internal economy of the nest and the progress of the rearing of the brood. The formation of the nest, from the earliest beginnings of the hybernated queen to the completion and roofing with concentric layers of paper, has been watched by the family with great interest. The insects are quite as unconscious of supervision as are the fish in an aquarium. Wasps' nests are very numerous this year in this neighbourhood.

Settle, Craven, ADDISON CROFTON.
July 13, 1901.

Foxglove.—A curious monstrosity in the common foxglove, *Digitalis purpurea* (white variety), is to be seen in the garden of the Old Hall, Stackhouse. When the plants began to bloom, and when two flowers had opened at the bottom of the raceme, one large bell was seen at the top which developed to about twice the size of the other. While the succeeding flowers on the stem are almost

devoid of spots, this one is very distinctly punctated. It is apparently a coalescence of two flowers, with lobes rather more deeply cut than usual; the stamens are eight instead of four, the general appearance that of a Canterbury bell, for which it was at first mistaken by the owner. When I saw it on July 17 it was rather withered, but retained its shape and position.

ADDISON CROFTON.

Settle, Craven,
July 18, 1901.

[This is the same variation recorded in our pages last year, which, as was then pointed out, was perpetuated by the late M. Vilmorin.—Ed. *N.N.*]

SELBORNE SOCIETY NOTICES.

New Members.—C. H. T. Whitehead, Esq., Aldershot; Wm. Dixon, Esq., Worthing; Miss Mabel Budd, Farnham; Rev. S. Soudy, Brough.

The Council begs to acknowledge with thanks the following subscriptions over 5s. :—Leonard J. Maton, Esq., £1 1s.; Mrs. F. Currer Jones, 11s. 2d.

The Deficit.—In response to the appeal of the Council in last month's issue, the following donations and promises have been received towards clearing off the deficit shown in the Treasurer's statement :—Mrs. Cornish Bowden, 10s.; Miss Chichester, 5s.; the Misses Brand, £1 1s.; Cornelius Surgey, Esq., £2 2s.; North Somerset Branch, 10s. 6d.; Mrs. Hyde Clarke, £2 2s.; Lady Joyce, £2 2s.

Council Meetings.—The next meetings of the Council will be held on Tuesdays, September 3 and 17 and October 1, at 20, Hanover Square, at 5.30 p.m.

FIELD CLUB RAMBLES.

September 7.—Weybridge. Leave Waterloo (main line) at 2.29. Take return tickets, 2s. 10d. Guide, Dr. Willson.

September 14.—Kingswood to Banstead and thence to Chipstead. Charing Cross, 2.6; London Bridge (S.E.R.), 2.15; East Croydon, 2.36. Change at Purley. Tea at Banstead. Return from Chipstead, 7.42. Take cheap return tickets to Kingswood. Conductor, Mr. E. A. Martin, F.G.S.

September 21.—Broxbourne. Train leaves Liverpool Street at 2.15 express to Broxbourne. Cheap fare, 2s. 6d. Guide, Mr. C. Nicholson.

September 28.—Oxted to Godstone Station. Leave Victoria, 2.30 p.m.; or London Bridge, 2.25. Take single tickets to Oxted. Fare, 1s. 8d. Tea at Godstone Station. Conductor, Professor Boulger.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 16, Mount Ararat Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, Mr. R. MARSHMAN WATTSON, 20, Hanover Square, W.

Nature Notes:
The Selborne Society's Magazine.

No. 142. OCTOBER, 1901. Vol. XII.

SELBORNIANA.

Gilbert White.—Mr. R. Holt White writes:—

"I should like, with your permission, to examine the question of Gilbert White's asserted unpopularity with his College, a point upon which I think distinct injustice has been done to him by some recent writers.

"First I wish to point out that, as far as I am aware, the whole of this story is of quite recent origin. Certainly I have known Oriel and Oriel men for more than thirty years, and I never heard anything of this kind until Dr. Shadwell's criticisms appeared in Clarke's 'Colleges of Oxford.' No doubt in continuing to hold his Fellowship all his life White took an unusual course, and very possibly, as Mr. W. Fowler suggests in your last issue, this may have given rise to some disappointment among the younger men; but then it must not be forgotten that every time White refused a College living (as he invariably did) a vacancy occurred in the Fellowships by its acceptance by some more junior Fellow. The facts upon this head are clear, and I am not now concerned to condemn or defend my kinsman upon this matter. But of late years, ever since the appearance of Dr. Shadwell's remarks, it has been the fashion to assume as an established fact that White's relations with his College were of an unpleasant character. Nor can Mr. Warde Fowler be acquitted in this respect, since, in an article upon Gilbert White in *Macmillan's Magazine* of July, 1893, he wrote: 'I do not wish to dwell on this [White's non-residence at Moreton Pinkney] or on his other relations to his college, which were not wholly of a pleasant character,' &c.

"Now upon what evidence or facts are these statements and insinuations founded? Mr. Fowler bases his remarks upon Dr. Shadwell's 'severe verdict,' as he terms it. This verdict was pronounced upon the testimony of two entries in the Provost of Oriel's memorandum book, and upon them alone.

"In the first of these entries, that of December 15, 1757, the Provost, who at this time, as we now know, was on terms of personal unfriendliness with White, merely records a proposal to deprive him of the hitherto uncontested right to hold the little cure of Moreton Pinkney without residence, and in the other of 1755 states his supposition, now known to have been unfounded, that White's inheritance would vacate his Fellowship. Dr. Shadwell was not, of course, in possession of the evidence and explanation which I have been able to adduce, and upon these two entries his condemnation of White was based. These entries, as we can now interpret them, cannot be said to furnish evidence that White was a *persona ingrata* at Oriel. Is there any other reason to presume his unpopularity? I know of none, and I can truthfully say that most of my leisure time for the

last five years has been spent in the investigation of every possible source ot information which could throw any light on White's life. His acceptance of a Proctorship while out of residence has been mentioned as 'not likely to be popular with his College' (Mr. W. Fowler, *ibid.*). Here again we have a mere supposition, of which it may be said that: (1) the course was by no means unprecedented; and (2) if this rendered White unpopular at Oriel it is very strange that his College should have at this time appointed him to the Deanship, the most important office of the College next to the Provostship, and in the next year (1754) should have elected his youngest brother Henry to an exhibition (Bishop Robinson's). Moreover, in the following year (1755) Mulso, on a false report of the Provost's death, wrote that he had heard that White was to be the new Provost, an office to which he actually aspired in 1757. That the College was not always a happy family is certainly true, since we find Mulso writing in 1755 of 'the perverse party at Oriel,' and in 1773 of 'the probable disputes at College,' but there is nothing to show that White's relations with his College were otherwise than pleasant. On the contrary, we find him visiting his College at least once, and generally twice or oftener, every year, and we have Jesse's statement (*cf.* his edition of the 'Selborne,' p. xi.) made upon the authority of a nephew of the naturalist's, of the latter's popularity in the Oriel common-room. Moreover in 1787 White's nephew (Samson, son of Henry White) was elected to an Exhibition and Fellowship at Oriel. At the death of Gilbert White the then Provost wrote expressing the regret of the College in what seem to be more than merely formal terms. All this does not connote strained relations or unpopularity at Oriel!

"In default of some definite evidence, then, the statement referred to may be relegated to the category of those assertions which, once they have a good start, are proverbially hard to overtake."

RICHMOND HILL AND ITS FAMOUS VIEW.—Mr. E. A. Martin writes:—

"Our readers will have noticed the progress reported from time to time of the efforts which are being made to preserve intact the beautiful view from Richmond Hill. County Councils and District Councils in different parts of Surrey and Middlesex are actively engaged in the work of preservation of the view, as well as other bodies whose sympathies and aims are coincident with theirs in this portion of their work.

"The movement has been inaugurated in the first place by the threatened development of an estate on the Middlesex shore known as the Marble Hill Estate, which has recently been laid out in part for building purposes. Portions of this estate are in the direct line of sight as one looks up the river from Richmond Hill, and if the building operations threatened be carried into effect, there can be little doubt that the view will be greatly interfered with. Some eight or nine years ago the Selborne Society in Richmond did a good work in rousing public attention to the fact that the view was then threatened in a similar manner, but in connection with lands which lay more immediately beneath the hill, and on the Surrey side. The efforts then made were for the time successful, and now that the view is threatened still further afield, the desirable end which the Society then fought for, namely, to regard the preservation of the view as a national duty, seems to have been fairly achieved, seeing the magnanimous manner in which the question has been taken up by many public bodies, as well as by private individuals.

"It must almost be an unique thing, I imagine, that the preservation of a 'view' should be the one subject of our influential committee. For to preserve the view, the expenditure of many thousands of pounds will be necessary. £70,000 is the sum asked for the Marble Hill Estate, but some of this may be recouped by the sale of portions unnecessary to the preservation of the view. But it will have to be carefully borne in mind that the view does not depend solely upon the one estate, and bearing in mind past experience, the purchase of one estate only may result in others being thrown into the market, and perhaps an enhancement of values will follow. It seems absolutely necessary that, once and for all, the matter shall now be settled, and before any purchase be decided

upon, that all possible estates should be scheduled, and vendors' prices obtained for them. Then the maximum cost can be seen beforehand, and there will be no fear of inflated values being placed by greedy speculators upon any land that may hereafter be desired.

"It is well known that the owners of the Marble Hill estate have undertaken not to proceed with building operations until the new year, receiving as compensation the sum of £3,500, and before December 31 the £70,000 has got to be raised for the completion of the purchase. But it will be of very little avail to purchase the one estate if all our efforts are afterwards to be frustrated by the prosecution of building operations all around that estate. The whole question is being dealt with by a committee, composed of delegates from the London County Council, the Surrey County Council, and other rural and urban councils, of the Commons Preservation Society, the Selborne, Kyrle, and other similar societies, the National Trust, &c. Sir Edward J. Poynter, P.R.A., Sir W. Richmond, R.A., Lord Monkswell, Lord Farrer, Lord Meath, Sir Robert Hunter, the Rt. Hon. G. J. Shaw Lefevre, Mr. Dickinson, and others whose names are constantly before the public in such matters are on the Committee, and are keenly interested in the movement. Poets and artists have rendered the view of the meandering Thames and its wooded vales famous in their works. It now remains to see whether public spirit will be strong and liberal enough to prevent its desecration."

THE WIDENING OF PICCADILLY.—Mr. Martin also sends the following letter :—

"As a result of a widespread expression of opinion, we are promised that when the widening of Piccadilly shall take place, eleven of the trees which skirt the Green Park will be spared, while others will be transplanted. Leaving out the question of transplanting, which is just what is not required, since removal in any shape or form is undesirable, it seems that out of some fifty-five fair-sized trees only one-fifth will remain. May I be allowed to repeat my suggestion made at the Annual Meeting in May, namely, that if the railings are removed so as to stand farther back in the Park, the smaller trees may, for the most part, remain where they are, and skirt the edge of the new pavement. The increased width of Piccadilly, near the bottom of Down Street, will then require more refuge accommodation, and the five or six large plane-trees (as well as the porter's rest), which are now on the edge of the pavement, might well remain down the centre of a refuge, about 100 feet long, and would give a welcome shade and shelter in hot or rainy weather. It is certainly to be hoped that something more in accordance with public wishes will be done to preserve a large proportion of the trees."

WILD BIRDS PROTECTION ACTS.—Mr. Joseph Collinson writes :—

"Is it not time that some endeavour should be made to bring these Acts up to date? Some of them have been in operation for several years, yet the destruction of rare and beautiful birds for 'specimens' is almost as rife as ever. The latest list of victims taken by the British bird-hunter includes the spoonbill, stork, honey buzzard, Montagu's harrier, two glossy ibis, and innumerable waxwings, hoopoes, and bitterns, not to mention several birds which, though not so rare, are rapidly becoming scarcer year by year. It is idle to appeal to the humane sentiment of the bird vandals: the collecting of British-killed 'specimens' is their special calling, and they study the Bird Protection Acts solely with a view to escape detection and punishment. So far as the birds I have named are concerned, the existing law is nothing more than a ridiculous farce, as they can be shot down with impunity, almost in every part of the country, by any reprobate with a gun. Owing to the omission of many migratory species, the casual visitor, and so forth, from the Statutory Rules and Orders, and the incompetent and slovenly way in which the laws are carried out by the administrative bodies, these Acts are only effective in those cases where they are least needed. Professor Howes, in a recent speech, expressed his opinion that 'the present unsatisfactory state of affairs is largely due to the apathy of the local

bodies.' No doubt the County Councils could do a great deal more for the protection of rare birds, but what is wanted is a Bill to consolidate and amend the law. Happily signs are not wanting that a determined effort will be made in Parliament to put an end to the absurd anomalies which now exist, and thus secure the birds against the inroads of sportsmen and fanciers."

THE FALL OF THE LEAF.

IN garden, orchard, field and hedge-row, the spectacle of colour displayed by Nature at this season forms by its variety one of the most effective scenes in any period of the year. The transformation from the fulness and richness of summer, with its life and movement, to the niggardliness, solitude, and inactivity of winter has commenced, and day by day the wonderful scene is gradually unfolding itself of Nature gaily bedecking herself before entering that repose which is like unto death.

The pictures which portray Nature in this garb are good, but not one has been painted yet which can present her as one can see and feel the full effect of the beauty of the change of the leaf under the mellow influence of the sun's declining rays.

An interesting feature of English landscape is that the grass is generally a bright green in winter, and this has become freshened now by the recent rains, which have also raised the level of the sinking pits.

On the hedge-rows the fruit of the very poor—the blackberries—still hang in thick clusters from their long trails, with green and red fruit intermingled, which will not ripen now as the frost has already nipped the berries. Where the fruit has been gathered, the holder is shrivelled and the leaves are turning a greenish yellow streaked with purple, in which garb there are few handsomer leaves.

In the country there is an old-world legend that when the hedge fruit is plentiful it is a prescience of a severe winter, but this was not verified last year. Be that as it may, God's bounty for the birds exists in profusion this year. The queen of bird-fruits—the handsome scarlet rowan-berries—have long been cleared, with the bulk of the black and white elder-berries, which are much-beloved by mavis, merle and starling. From the aged elder-tree the hazel leaves are falling, whilst a few bunches of jet-black berries hang on red stalks, left untouched, out of plenitude, by the feathered tribe.

By the hedge sides a carpet of bronze leaves is being formed. The large hawthorn tree will soon be divested of its leaves, blushing then in its nakedness, a mass of red berries. The haws hang in thick clusters on nearly all the thorns—a vivid scarlet framed in a background of green, now gradually changing to a lemon colour, dotted with dark specks, indicative of decay.

The hips, less fruitful, are numerous, and are flushing from a pale green to a luscious vermilion. The hollies are rich with berries which have already assumed their blood-red colour, and they stand out prominently from a mass of fresh green leaves.

The lime trees are rapidly losing their amber dress, and under the oak, ash, maple saplings and rowan-trees, the sere leaves lie thick. In the distance the old oak, elm and ash trees appear still green, but the ashes are putting on a pale tint. When one is near, the others show signs of the turning of the leaf. The wind plays gently through the oak, and frequently the ripe brown acorn drops through the branches with a rustle and a gentle thud on to the greensward beneath, where many a meal will be provided later on for the wood pigeon and the pheasant. Numbers of those marvellous cups with one, two and three on a slight brown stalk still hang upon the tree with the fruit discharged, but when the leaves fall they will come too.

In the glistening sunlight the dark brown of the chestnut, the russet of the beech, the bright yellow of the crab, and the lemon colour of the damson and rose, form a pleasing contrast with the evergreens in the background. By the river-side a weeping willow is completely bare, as if exhausted by excessive grief, whilst another quivers in the murmuring breeze as its whitish leaves patter to the ground.

Over the meadow, where the grass has not been mown, the long light rye-grass, leaning earthward as it is gently swayed by the wind, is still full of seed, and, with the dead stalks of a thousand flowers that have lived their day, affords excellent shelter for game in the green undergrowth. The meadow where the cattle have grazed, and the hills around, extend like a huge green carpet and form a fitting setting for the picture of the varied-hued leaves and fruit in all directions. The rye-grass is dry, but the undergrowth is soaked, as it always is at this time of the year, and here and there a belated flower, which flourishes when swallows come, peeps through the earth as if to bid them a loving and a last farewell.

FRANCIS JOHN UNDERWOOD.

THE SONG OF THE LARK.

DURING my life (and I am but a stripling yet, of twenty-six summers), I have probably listened to more larks singing than to any other British songster. For me, nevertheless, this sweet-voiced minstrel has a special charm, and I should never tire of listening to its joyous melodies. I may say at once it is my favourite British song bird: for me it has an attraction and a fascination indescribable. Thus I may be pardoned, perhaps, if in my notes respecting the bird's song I may appear over zealous in the praise bestowed upon this scorner of the ground.

The song itself is of so beautiful a description that any attempt to write it down must surely fail. As the bird proceeds in its aerial flights, it seems to increase in volume, sweetness and cadence. Right unto its final outburst, just previous to the lightning fall to mother earth, the bird appears to gather music as it goes. Albeit the song seems little varied, yet it can never become monotonous. Its sweet chromatic lays and trills—call them what you will—uttered as they are during such prolonged and interesting song-flights, always hold me entranced, and no sooner have I finished watching one particular bird alight safely on the ground than I find myself eagerly scanning another bird just ascending, and I have often been entertained for a whole morning in lark-land alone.

My natural history diary for 1900 has been most religiously kept, and I will quote a few extracts therefrom respecting the bird now under consideration.

January 24.—Miserable Scotch-misty morning, but the skylark singing in spite of the unpropitious elements. This is the first time I have heard a lark singing for some weeks. I saw two or three chasing each other over the fallows. The sound uttered as they do this is very musical and clear-ringing.

January 26.—The skylark was soaring and singing deliciously this morning, and the rooks were up afore times.

February 3.—The larks do not seem to relish this return of winter, and are quite silent again.

February 17.—Snow nearly all gone. It is quite nice to see the green meadows of old England once more. I watched with much pleasure a skylark soaring this morning, and pealing out those beautiful bells we all know and love so well. He was soaring in a circular direction, and I verily believe he was endeavouring to attract a female as a partner for the nesting season of 1900.

There is, to my mind, much more in this bird language than we can understand, and the deeper we investigate the more mysterious and wonderful it becomes. With the surroundings so damp and dismal, I could not help admiring this courageous lark pouring out such bubbling music, and the sight and sound did my heart good, and spurred me on for brighter days.

February 19.—Very wet to-day, but skylark singing joyously. I have noticed many times that this bird soars and sings in wet weather, and will sometimes leave off temporarily on bright, sunny days. His song is not always poured forth, as some writers assert, on bright days, and his voice does not always "fall down through the golden sunshine like a flood of sparkling melody."

February 25.—Skylarks singing everywhere.

February 26.—Raining, but skylark singing. Why does this bird sing in such dismal weather?

February 27.—Raining in torrents, but does not damp the ardour of the lark. It must be that this continual singing is for a partner.

March 3.—I nearly trod upon a lark to-day: he soared aloft and sung harmonious music, but what is this bird language? He could not have been happy, because I had disturbed him. We do not understand bird nature any more than we do human nature.

March 28.—Skylark singing in spite of wintry surroundings.

April 11.—Rained heavily towards evening, but skylark soaring and singing at 6.30 p.m.

April 13.—Skylark singing, and all paired off now.

April 30.—Skylark singing more these last few days.

May 11.—Skylark soaring and singing at 8 p.m.

May 19.—Skylark singing more joyously than ever. He, too, blithe spirit, seems to realise the welcome news which has just reached us of the relief of Mafeking, and small wonder, for is not the lark a thorough Britisher?

May 20.—It has been another day of universal lark song.

May 27.—The first bird sounds which broke upon my ear this quiet Sabbath morning—mornings that give to this fair land of ours a beauty almost divine—were the cry of the cuckoo, the ever-welcome lay of the skylark, and the crow of some gay chanticleer a few gardens off.

May 28.—Skylark soaring and singing at 8.45 p.m.

May 31.—Skylark still singing. My notes with regard to this feathered musician are very frequent, for the reason that no matter when I am in or near my house I can hear half a dozen of these birds pouring out their joyful melodies. They are very plentiful indeed in this district, but, alas for the Nature-lover, the town is rapidly extending its area, and many an old green lane of our boyhood has been effaced beyond recognition. The expulsion of the larks as neighbours of mine is, I am afraid, near at hand. A year or two will probably see them driven away from their present haunts, for by that time bricks and mortar will have superseded the corn fields, the meadow lands and the other rural surroundings—but sufficient for the day is the evil thereof.

June 2.—The skylark keeps my spirits up. (It will be remembered that June, 1900, was ushered in by cold, boisterous weather.) He is in incessant song from the time the first rays of the sun flash across the dew-spattered meadows until between 8 and 9 p.m.

June 12.—The skylark, as usual, was towering towards the clouds quite early this morning, singing as beautifully as ever he did. Is not the singing season of this bird a lengthy one? We will perhaps analyse it later on.

June 18.—Skylark singing: no stifling atmosphere, no cold east winds or driving rains damp the ardour of this bird.

July 13.—The lark sings on. I am never at home without a lark can be heard singing right over my house. How few residents in the district take notice of the little jewel suspended in mid-heaven; but I, for one, worship the sweet-voiced minstrel.

July 15.—The lark was the sole chorister in Nature's choir to-day. Cold and heat do not affect this bird, and that is why he is such a favourite of mine. There, in the broiling sun, the bird could be seen towering up towards the cloudless sky, singing sweet and delicious strains.

July 29.—Skylark singing, but not so continuously as it has done.

August 1.—The lark has certainly been very silent this last few days, but a reference to our diary gives us the interesting information that this minstrel has been singing practically without cessation since February 17, and during some part of January. I heard it last on July 29.

August 5.—Lark singing, but song by no means well sustained.

September 9.—Have not heard lark singing since August 5. Robin the only bird in song.

September 14.—Skylark heard uttering its full song as it was being chased by one or two others—surely uttered in anger or defiance—by no means strong or fully sustained. Only a minute before we had written in our note-book "Skylark still silent!"

September 16.—Heard two skylarks singing to-day, but the song was not well sustained, and the re-assumed song period has not yet, I think, arrived. Still, hearing the well-known notes again was very welcome and afforded much pleasure.

September 23.—Quite a number of skylarks have resumed song again, and I am so pleased, because this is my favourite musician in the feathered world.

October 3.—Skylarks singing daily, but they seem a tremendous height in the air. I am continually hearing them now, but can rarely see them.

October 6.—How the lark cleaves the air, especially when looked at through a pair of good glasses. It always seems to soar and sing with its head to the wind. Is it not interesting to watch it soaring upward? Taking the glass from the eye, the observer can scarcely see the bird again with the naked eye, as it towers higher and higher until finally lost in the blue sky. Then it suddenly commences the descent, falling slowly, slowly, slowly, singing all the while, until finally it drops like a stone to the earth in a slanting direction. It is a wonderfully captivating and interesting sight, and one not easily forgotten.

October 14.—Owing to the blustering winds it was possible to hear hardly any birds, and the only one singing was the skylark. He was aloft with his head to the breeze, singing gaily that captivating song.

October 30.—Skylark in full song.

November 15.—The lark is not now in such continuous song.

November 18.—Skylark singing casually.

November 25.—Although such a spring-like morning and many hundreds of these birds were to be seen and heard twittering, only a few were actually singing.

December 6.—A solitary lark singing, appearing like a mere speck against the blue and white sky line.

December 9.—The most common bird this morning was the lark. Larks were everywhere and singing joyously. So soon as it was fine and bright the birds ceased singing. Is this not curious ?

December 16.—Heard the skylark singing to-day, since which time until the end of the month it has been quite silent.

Thus our extracts cease, and I have devoted so much space to the song already that I must not enlarge.

He who can hear a lark sing without straining eyes heavenwards to catch a sight of the blithe spirit, as Shelley so ably described the bird, must surely be one who "hath no music in himself." I should add that I have known the bird to sing for forty-five minutes at a stretch, soaring the whole time, and that I have seen it perch on trees, which is a contrary observation to that of most writers.

Of the numbers of these beautiful songsters which are caught and consumed during the winter, I have only space to say that I am surprised at English men and women who have the heart (or the stomach) to digest a bird they must know is such a minstrel of "Liberty, Joy and Love."

W. Percival Westell, M.B.O.U.

REVIEWS AND EXCHANGES.

Familiar Butterflies and Moths. By W. F. Kirby, F.L.S., with eighteen plates containing 216 illustrations in colour. Cassell and Co. Price 6s.

In spite of the large number of cheap introductory works on entomology that have issued from the press of late years, we confidently assert that there is no English work, at anything like the price, which affords so attractive, so accurate, and so well-illustrated a guide to the beginner in the study of the Lepidoptera, as does this new book by Mr. Kirby. Mr. Kirby's name is a sufficient guarantee of the thorough accuracy of the work; but we hasten to mention that, though intended for the young collector and containing much useful advice on when and how to collect Lepidoptera, Mr. Kirby does not rest content with mere descriptions to aid in identification, but adds an introduction to the whole biology of this order of insects which is none the less scientific because it is expressed in simple language, as free as possible from technicalities. The shape of the book—a quarto—is unlike that of the other "Familiar" series published by Messrs. Cassell : but it follows the example of its predecessors in not being restricted to British species ; and when we add that, while six plates, comprising fifty-two species, are devoted to butterflies, three plates figure fourteen species of hawk-moths, and the remaining plates include 104 species of moths, it will be seen that it is no mere "butterfly book." In several cases larvæ, pupæ and food-plants are also figured. The plates are, we think, the best specimens of colour-printing Messrs. Cassell have yet produced ; but the irregular arrangement of the reference numbers is somewhat annoying. The type is large and clear ; but we could have wished for a more reposeful cover. To produce such a book at the price is indeed a triumph.

A Text-book of Astronomy. By Professor George C. Comstock, of the University of Wisconsin. Twentieth Century Text-books. Hirschfeld Brothers. Price 7s. 6d. net.

As each volume of this series makes its appearance, it maintains the character of its predecessors for workmanlike thoroughness. Though, by a happy thought, rendered attractive by four full-page portraits of the greatest astronomers and by views of famous observatories, this is no gossipy reading-book, but a text-book for students, dwelling especially upon the observational and experimental side of the subject, and only leading up to such speculations as the nebular hypothesis at the close of a logical sequence of lessons. The illustrations, and indeed the whole work, are refreshingly original, and the inclusion of a card protractor in a pocket in the cover marks its practical intention.

An Essay on the Protection of British Birds. By H. S. Davenport. J. W. Warner, Melton Mowbray. Price 6d.

Mr. Davenport unfortunately has a grievance, apparently in that this essay of his failed to meet the approval of the Committee of the Society for the Protection of Birds, and was not submitted by them to their final arbiter, Canon Tristram. He has a very easy task in pointing out the ignorance of ornithology displayed by County Councils, and deprecates as over zealous the wholesale protection of all species indiscriminately. The Wild Birds Protection Acts must soon be entirely overhauled, reconsidered, codified and *enforced*, and those who are responsible for this task will doubtless consider the arguments which Mr. Davenport so forcibly expresses.

British Blood Sports. Humanitarian League. Price 2d.

This is a collection of twelve leaflets, including Tame Stag Hunting and Fox Hunting, by the Rev. J. Stratton ; Pigeon Shooting, by Arthur Harvie ; Coursing, Hare-hunting, The Otter Worry and Shooting, by Colonel Coulson ; The Wild Stag Hunt, by the Rev. H. C. Ricketts ; Deer-stalking, by Lady Florence Dixie ; The Slaughter of "Big Game," by Ernest Bell; and Angling, which is unsigned. While every Selbornian will probably be in sympathy with some, perhaps most, of these leaflets, it may be doubted whether the Humanitarian League does not lessen the force of its attack against any one of these forms of "sport," by the mere act of stitching them together. They should remember the fable of the bundle of sticks.

Board of Agriculture Leaflet, No. 68, *Currant Aphides ; and No.* 69, *Tent Caterpillars : the Lackey Moth and the Brown Tail.*

The local secretaries of our country branches should write to the Secretary, Board of Agriculture, 4, Whitehall Place, S.W., without stamping their letters, for copies of these, and of the other leaflets issued by the Board, which will be sent free of charge and post free, and should be read out in every school or village institute in our rural districts.

Received :—*The Victorian Naturalist* for July and August ; *Science Gossip*, *The Naturalist*, *The Naturalists' Journal*, *The Irish Naturalist*, *Our Animal Friends*, *Humanity*, *The Animals' Friend* and *The Agricultural Economist* for August and September.

NATURAL HISTORY NOTES AND QUERIES.

Darwin's Theories.—It would doubtless interest many of your readers if the author of the "Naturalists' Ramble" in the September number of NATURE NOTES, would give his reasons and authority for saying with regard to Darwin's theories: "they are passing, like all such things." It would be interesting to know which of Darwin's theories are "passing" in the author's opinion, and where is his proof that such is the case.

The Gables, Wirksworth. C. E. MEADE-WALDO.
September 8, 1901.

The Domestic Mouse a Vegetarian.—From observations I have made quite recently, I should say that the domestic mouse is a vegetarian of no mean taste. It has been my habit to keep in the house a small quantity of watercress and lettuce for a few pet canaries I keep, and have found to my consternation of late, that I have been robbed of my birds' green food in a wholesale manner. The mice have taken care to leave nothing but the stems of the watercress and lettuce.

2, *Canonbury Place, N.* CHAS. E. J. HANNETT.
September 10, 1901.

Provincial Name of the Heron.—Your correspondent, G. F. Rope, speaks of the old Suffolk name of the heron as "harnser." Clearly this is a provincial variant of "Hernshaw" (probably Hamlet's "Handsaw"); and this again is from the old French "*Héronceau*," a young heron. Survivals of early names are always interesting.

7, *Holmesdale Road, Kew.* E. HUBBARD.
September 8, 1901.

Swallows and Martins.—Swallows are as common as usual this year, and build in their usual haunts. Sand-martins are very common, perhaps increasingly so. Swifts are, I think, on the increase also, but house martins are waning. Where I used to see six nests I can now hardly find one. This can hardly be due to lack of food, because the other Hirundines and the bats are busy every evening, and appear to find abundance; but the diminution is due to the persecutions of the house sparrow, which multiplies greatly. There are no cereal crops raised in this part of Craven, and a plough is almost a thing unknown, so no one cares to shoot sparrows, as in the grain-growing counties, and consequently they abound to the detriment of more interesting birds.

Settle, Craven, July 13, 1901. ADDISON CROFTON.

House-Martins.—The house-martins, driven from their nests again and again by their persecutors, the sparrows, have in one case resorted to a device which seems to be deliberately intended as a counterplot. Instead of building almost horizontally from the base upwards and making the opening in the centre of the upper lip, they have commenced from one side and built across to the other so that there has always been a perpendicular line during the building, giving no foothold to the sparrows; and the opening has been made in the extreme corner next the wall, which the sparrows cannot so easily reach. So far at least the strategy has been successful, and I hope to see a brood safely reared, and possibly an evolutionary process established for preserving the martins from extinction!

White Notley Vicarage, Essex. A. F. CURTIS.

The following, will I think, answer W. F. Collins' query in last month's NATURE NOTES regarding house-martins. The side of my house requiring painting this summer, I directed the painter not to interfere with four martins' nests under the eaves. He replied, "I won't touch them if martins are in them; but I will if sparrows are." The latter proved to be the case.

West Monkton, Somerset. JULIA K. BRINKLEY.

Sand-martins.—On August 21 I saw many hundreds of sand-martins sitting closely together, on a short stretch of telegraph wires, preparing for their

departure. When a train passed, they flew off in a cloud, their brown backs and white bellies glistening in the sun. The birds are reared in the sandy banks of the drains in this district.

Boston, Lincs. H. E. COCKSEDGE.

[I saw the same thing on August 19, at Beaumont-le-Roger in Normandy.—*Ed. N.N.*]

Rare Birds released in England.—I quite agree with Mr. Collier in deprecating the destruction of rare visitants, and in regarding this as unscientific. He and others who agree with him may be interested to know that I have lately been endeavouring to encourage some of our rarer birds, by liberating foreign specimens of such species as were readily obtainable.

In all, I have let out about a score, eight or nine rosefinchea (*Carpodacus erythrinus*) in Devonshire, nine crested larks (*Galerita cristata*) in Kent, and a pair of black-headed buntings (*Emberiza melanocephala*) and a rosy pastor (*Pastor roseus*) in Regent's Park—in the Zoological Gardens, in fact.

All these rank among "rare occurrences" to be shot at sight. But if a practice be made of liberating imported examples of species like this, collectors will perforce have to let them alone, as it will be impossible to discriminate between these released captives and natural immigrants.

Of course all enlargements of this kind should be carefully notified. There need be no fear of introducing noxious species by this means. No bird appears to be thoroughly detrimental but the house-sparrow, and in his case mere abundance has a great deal to do with his destructiveness to our crops and aggressive behaviour to other birds. Keep down the sparrow and liberate a specimen of an "occasional visitant" whenever possible, and our bird population will stand a chance of becoming a good deal more varied and interesting than it is at present.

Care of Zoological Society, FRANK FINN.
3, *Hanover Square.*

Strange Nesting Places.—A pair of great tits have built in a sea-kale pot in my garden, the entrance being formed by a small breakage in the upper rim. The whole floor of the pot, about a foot in diameter, was covered with moss to the depth of two or more inches and the actual nest hollowed out of this on one side. The whole brood of eight has been successfully brought off.

A stock dove has nested on the ledge of a small window in the apex of the western wall of the church, the bird sitting in full view of passers by, but fifty feet out of harm's way.

White Notley Vicarage, A. F. CURTIS.
Essex.

Birds' Nests.—For some time I have known of a number of starlings inhabiting disused woodpeckers' holes. About the middle of the breeding season, round about these trees, starlings' eggs are scattered—about a dozen or so—apparently quite good. Can you account for this?

In a wood near here I know of a tree with its top broken off. On this quite unprotected place for the last two years a pair of tawny owls have reared their young. This is surely a somewhat peculiar place for an owl to breed in, considering that the sun must be full on for a great part of the day, also it is quite unsheltered from the rain!

Haileybury, July 21. R. E. W.

[It is not at all uncommon for starlings to drop their eggs in this way.—Ed. *N.N.*]

A List of Birds which Breed in the District of Beith, Ayrshire.—I visited Beith, Ayrshire, the second week in June, 1901, where I rambled with two of the most practical field ornithologists it has ever been my good fortune to meet. My esteemed friends, John Craig (whose painstaking work in connection with the series of cuckoo photographs taken by Mr. Peat Miller is by this time well known), and Matthew Barr, although only working men, and whose spare time is restricted, are acquainted with every species known to breed in their neighbourhood, and the following list was taken down by me from

them during my visit. It will be noticed that this list deals with seventy-seven species, a star indicating what I myself identified.

*Blackbird	Breeds and is common.
Bullfinch	,, regularly but scarce.
Corn Bunting	,, ,, ,,
*Reed ,, ...	,, ,, and is common.
*Yellow ,, ...	,, ,, ,, very common.
*Chaffinch	,, ,, ,, common.
Chiff Chaff	Has bred but is rare.
*Coot	Breeds regularly and is very common.
*Corncrake	,, ,, ,, ,,
Tree Creeper	,, ,, but is scarce.
Carrion Crow	,, occasionally but is scarce.
*Cuckoo	Fairly common.
Curlew	Breeds regularly and is fairly common.
*Dipper	,, ,, ,, ,,
*Ring Dove	,, ,, ,, common.
*Wild Duck	,, ,, ,, fairly common.
*Dunlin	,, ,, ,, ,,
*Spotted Flycatcher	,, ,, ,, ,,
Goldfinch	,, occasionally but rare.
Little Grebe	,, regularly and is fairly common.
*Greenfinch	,, ,, ,, common.
Red Grouse	,, ,, ,, ,,
*Black-headed Gull	,, ,, but sparsely.
Sparrow Hawk	,, ,, ,,
Jackdaw	,, ,, and fairly common.
Kestrel	,, ,, but scarce.
Kingfisher	,, occasionally but scarce.
*Lapwing	,, regularly and is very common.
Linnet	,, occasionally but rare.
Magpie	,, regularly and is fairly common.
*House-Martin	,, ,, ,,
*Sand-Martin	,, ,, scarce.
*Moorhen	,, ,, and is fairly common.
Ring Ouzel	,, ,, but is not plentiful.
*Long-eared Owl	,, ,, and is fairly common.
Partridge	,, ,, ,, common.
*Pheasant	,, ,, ,, ,,
*Meadow Pipit	,, ,, ,, very common.
*Tree Pipit	,, ,, ,, fairly common.
Golden Plover...	,, ,, ,, ,,
Water Rail	,, ,, but is rare.
*Robin	,, ,, and is common.
*Lesser Redpoll	,, ,, but scarce.
*Redshank	,, ,, and is fairly common.
Redstart	,, occasionally but is rare.
*Rook	,, regularly and is very common.
*Common Sandpiper	,, ,, ,, common.
*Skylark	,, ,, ,, very common.
Snipe	,, ,, ,, fairly common.
*Hedge Sparrow	,, ,, ,, common.
*House Sparrow	,, ,, ,, very common.
*Starling	,, ,, ,, ,,
*Stonechat	,, ,, but is rare.
*Swallow	,, ,, ,, scarce.
Mute Swan	,, ,, ,, ,,
*Swift	,, ,, and is common.
Teal	,, ,, but is scarce.
*Mistle Thrush	,, ,, and is common.
*Song Thrush	,, ,, ,, very common.
*Blue Titmouse...	,, ,, ,, fairly common.

*Coal Titmouse...	...	...	Breeds regularly and is fairly common.
*Great Titmouse	...	...	,, ,, ,, ,,
Marsh Titmouse	...	...	,, occasionally but is rare.
Twite ...	...	...	,, ,, ,,
*Grey Wagtail ...	...	...	,, ,, and is fairly common.
*Pied Wagtail ...	...	...	,, ,, ,, ,,
*Yellow Wagtail	...	...	,, ,, ,, common.
Garden Warbler	...	...	,, ,, but scarce.
Grasshopper Warbler...	...	...	,, ,, ,, sparsely.

(My two friends have found up to date seventeen nests of these birds, which is believed to be the record for Scotland.)

*Sedge Warbler	...	...	Breeds regularly and is common.
*Willow Warbler	...	...	,, ,, ,, very common.
Wood Warbler	...	...	,, ,, but is scarce.
*Wheatear ...	...	...	,, ,, and is fairly common.
*Whinchat ...	...	...	,, ,, ,, ,,
*Greater Whitethroat ...	...	...	,, ,, ,, common.
*Common Wren	...	...	,, ,, ,, ,,
*Golden-crested Wren...	...	...	,, ,, but sparsely.

They have also taken the eggs of the woodcock in the district.

St. Albans, Herts, June, 1901. W. PERCIVAL WESTELL.

Plovers and Curlews.—There is an idea prevalent that the curlew and the lapwing are becoming scarcer. This may be so in other parts of the country, but it is certainly not the case in Upper Ribblesdale. Never have I seen and heard so many curlews as during this spring. I should be inclined to say that there has been a steady increase in the last five years. Lapwings, or "tewits," as they are locally termed, are as common as ever, although large numbers of their eggs are collected annually for food. The reason for their abundance appears to be that the local dealer will not purchase any eggs after a certain date, and consequently the birds can rear a brood. The plover is not given to forsaking her nest, but will continue to lay like any barndoor fowl. The trade in eggs has the effect of ensuring a close time and protecting the birds, for it is to the interest of every farmer and farmer's boy to stop the collection of eggs early in the season, and also to discontinue the shooting of the birds.

Settle, July 13, 1901. ADDISON CROFTON.

Jackdaw.—A jackdaw has for the last three or four years built a nest in the turret of Settle Church. The nest was begun upon the floor, but has been raised to the level of the window-sill by a vast accumulation of sticks. There must be several barrow-loads of material collected in the mound, and the height is about three feet or more.

Settle, Craven, July 13, 1901. ADDISON CROFTON.

Tits.—In a church at which I have lately been, a pair of tits built their nest. The birds entered by the shutters in the tower, about forty feet from the ground; they then crossed the belfry, going through one of the holes for the ropes in the belfry floor; then past the vestry to their nest in the nave.

Market Weston, Thetford, August, 1901. EDMUND THOS. DAUBENY.

Pigeon with odd Eyes.—When at Minehead, I was shown a pigeon with odd eyes, one the usual pigeon's eye, the other with a very large black pupil resembling the eye of a fish. The bird's sight was in no way affected, but it had a most curious effect.

Teignmouth, Devon. CAROLINE E. FARLEY.

Tame Kingfishers.—When fishing at Barton Mills, recently, I had a somewhat curious experience, and one which, I think, has fallen to the lot of but few anglers. I was sitting on a garden seat, on the bank of the Tuddenham Stream; the weather was warm, and fish were shy, and I had fallen into a semi-somnolent state when a kingfisher alighted upon my rod. In a few minutes it was joined by a second bird of the same species. The two kingfishers preened and plumed themselves, and then dived once or twice in quest of fish, returning again to their perch on my fishing rod. This continued for about half an hour;

when, no longer able to remain in the cramped position in which I sat, and somewhat dazed with the heat, I raised my rod aloft. The pretty little birds displayed some reluctance in quitting their perch, and for my part I was exceedingly sorry to disturb my pretty little companions. The kingfisher is one of the shyest of birds, and I have never before known birds of this species to display such fearlessness in the presence of mankind.

Newmarket. WILLIAM HOWLETT.

Gulls.—Is it a common occurrence for gulls to dive from a height? Whilst staying at the Land's End during August, the pilchards arrived and the gulls would hover over the water about 100 feet in the air, suddenly dropping like a stone with a splash into the sea, coming up a couple of minutes afterwards with the coveted fish.

September 11, 1901. A RUGBY SELBORNIAN.

Robins.—My esteemed friend, Claude St. John's, notes in the September issue (page 174), are decidedly interesting, and I am obliged to him for his valuable observations. A day or two since, I noted four male redbreasts singing all within twenty yards of one another. Presently there was a skirmish and they chased each other incessantly, but although I observed them for some considerable time no battle took place. I have therefore yet to witness a pitched battle, and can only conclude that I have been singularly unfortunate as Claude St. John observed.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.N.
September 12, 1901.

Gunners or Wraiths?—A correspondent sends us the following story of some birds kept by the late Mr. Francis Stanier, of Peplow Hall, near Market Drayton. Mr. Stanier was a millionaire and a well-known philanthropist, and was very fond of birds. He had some favourite American and Japanese geese, which he fed with his own hands, and which were kept on a pool near the Hall. He died about a fortnight ago, and strange to relate, during the last hours of his illness these birds, numbering over 100, flew around his bedroom window, beating their wings against the glass. They would then fly over the roof of the house, and all the time they were uttering a weird, screeching noise. In almost the last moments of the squire's life the whole flock of birds disappeared, and not one of them has been seen since.

Red Mites on Canaries.—M. C. will find "Knight's Unique Mite Destroyer" an effective application for ridding cage birds of the troublesome red mite parasite. It is procured from A. A. Knight, Chemist, Allerton, Bradford, and full directions are on the bottles. I have kept birds for thirty years and found nothing so efficient for its purpose. If birds will not take a bath with the mixture in the water, they should be caught and carefully but well washed in it. One or two dips are generally sufficient, and the remedy is perfectly harmless.

9, *Sussex Square, Brighton.* CONSTANCE VERNON-BELL.
August 6, 1901.

White Robin's Egg.—In reply to Mr. J. B. Stilwell's note hereon, I found a robin's nest in an old tin can on May 26, 1901, containing six eggs. Two of the eggs were pure white and perfectly fertile.

The can was in an unfrequented wood, and on my visiting the same to photograph it on June 2, it was found turned completely round! It seems quite impossible for the birds to have done this themselves, yet being a lonely wood, it does not appear that the act was performed by anyone anxious for the preservation of the redbreasts!

5, *Glenferrie Road,* W. PERCIVAL WESTELL, M.B.O.U.
St. Albans, Herts, August 6, 1901.

Toads, Tits, Bees.—The remarks from the *Pall Mall Gazette* quoted by "Tadpole," are unfortunately true respecting the fondness of toads for bees. Here toads are in such numbers that we have to be careful in walking on the lawn in the evenings or we crush them underfoot. I am constantly on the watch to save my bees from their attacks; for when once they find they can catch them underneath a hive, they take up their station close by, and regularly feast off the tired bees as they come laden home. In some cases swarms are decimated by

them. This year I have been obliged to take the lives of several in consequence of their depredations, one that was gorged with my bees I removed to a distance. Next day she was back in her old spot. A second time I removed her with a like result. After that I reluctantly took stronger measures. With the exception of this fondness for bees, toads are most useful creatures, and are to be encouraged in our gardens. "Fussy little tom tits," however, do not interfere with my bees, and as far as my observation goes, have never done so. This summer there was a tit's nest in a box six feet from one of my hives, and the bees were not touched.

Market Weston, Thetford. EDMUND THOS. DAUBENY.
August, 1901.

Palmate Newt.—Would any reader or contributor of NATURE NOTES kindly inform me whether the palmate newt scientifically known as *Molge palmata* occurs in Berkshire. I have never met with it myself. The two other species are of course common enough. If it does occur in the county I should like to know the exact locality.

Fyfield, nr. Abingdon. W. H. WARNER.

Frogs Migrating ?—Mr. Daubeny's notes on toads and his reference to them migrating, reminds me that on July 7, of the present year, I came across an incredible number of minute frogs which may have been migrating. The day was dull and oppressive early, bright towards evening, and it would be about 8 o'clock p.m. when I noticed them. They were hopping about a country lane and it was an impossibility to walk along without treading on them. I have never noticed this previously in all my Natural History Rambles. Cannot someone who is an authority on these creatures enlighten us?

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
September 12, 1901.

Toads.—In the correspondence in your columns on the subject of toads, there is no mention of the terms of pleasant companionship on which one may readily find oneself with these maligned creatures. If one has the good fortune during an evening walk to meet a toad in a quiet lane, it is well worth while to pick up a light twig and to begin stroking and rubbing our friend's dull rough sides with it, in the same way as one would rub with a stronger stick the sides of a pig to whom one wished to make friendly advances. The toad, if he has not been startled, will be inexpressibly delighted with this attention. He will stop in his travels, raise himself on his legs, so as to lean to the side on which the delightful rubbing goes on, reversing the tilt if one caresses the other side; and his attitudes of sentimental ecstasy sometimes become so irresistibly ludicrous that one cannot keep up the stroking and rubbing as long as one would wish. This note is written for the benefit of those who would like to see a toad at his best.

Sept. 8, 1901. E. HUBBARD.

Bees in a Church Tower.—A new clock having lately been given for the fine old tower of St. Michael's, Minehead, a large colony of bees had to be dislodged. They had entrance through the dial of the old clock, the works of which were removed about thirty years ago, the dial being left in the tower, and I was told that they had been there quite twenty years. The greater part of the comb was at the back of the dial, but much also hanging inside the tower, supposed to be about three quarters of a cwt., all of which, with the bees, had unfortunately to be destroyed, prussic acid being used, as burnt sulphur had no effect upon them, and before the new works were put in they had to be got rid of. Two swarms, however, came off when disturbed, one lodging on a tree in the Avenue, the other on a steam roller in use. There were many thousands of bees and it seems curious that they could survive the winter in such an exposed situation, subject to severe gales from the Bristol Channel, also that they did not object to the noise and vibration of a full peal of bells. The bees had no ingress to the church itself.

Teignmouth, Devon. CAROLINE E. FARLEY.

Insects at Haileybury.—This season has been indeed excellent, so far, as concerns insects. I think some of the commoner kinds appeared a trifle late in the spring, but this was no doubt owing to the rather backward state of the vegetation.

The entomologists about this neighbourhood will have good reason to remember 1901 for the number of rare or local species which have been practically common. Two grand specimens of *Stauropus fagi* have been caught—a male at light and a female sitting on a tree trunk. *Cymatophora ocularis* has been caught several times. I should like to know what is the reason for the sudden increase in the number of species of butterflies found here. Last year *Thecla W-album*, was first caught—this year it swarms literally, and two years ago *Argynnis paphia*, *A. aglaia*, *Polyommatus corydon* seem to have been very rare visitors. *Macroglossa fuciformis* was in great plenty, too, this spring, and I believe till then it had not been caught, except one solitary specimen. *Phibalocera quercana* was abundant too: I did not know till this year that it was so much attracted by sugar. The profusion of the pretty *Thyatira derasa* and *T. batis* is remarkable, and *Gastropacha quercifolia* is caught most frequently. A specimen of *Boarmia roboraria* was taken at light, and several *Pericallia syringaria*. Sugaring for moths has been tried a great deal this year by most of our entomologists, and great success has attended their efforts, a good bag being usually procured, including *Zeuzera æsculi*. The country in the immediate neighbourhood is admirably adapted to the requisites of caterpillar life, there being much woodland and many open fields. The ravages of insect hunters do not seem to have reduced the numbers of species found in the least.

Haileybury, July 22. N. R. D. TENNANT.

Holly Blue in London.—I do not know whether the appearance of the Holly Blue in London is sufficiently unusual to be worth recording in NATURE NOTES.

I have seen it to-day and on seven other days lately. I have seen it in two places more than a mile apart, one in Kensington and one in Fulham. The butterfly settled mostly on the privet flowers.

Is it likely that these were some of the butterflies that have been imported into the London Parks?

15, *Airlie Gardens, Campden Hill, W.* JOHN D. BATTEN.
August 6, 1901.

[No Blues have, I believe, been imported; but this species has been exceptionally abundant this year.—ED. *N.N.*]

The Holly Blue Butterfly (*Lycæna argiolus*) has been exceptionally common in this neighbourhood; I see it daily in my garden. It is easily distinguished from the common blue by the absence of orange spots on the under side of the hind wings.

White Notley Vicarage, Essex. August 7, 1901. A. F. CURTIS.

Larvæ of Vanessidæ.—"L.'s" appeal in NATURE NOTES for July caused me to rear a quantity of larvæ, and it may be of interest to Selbornian entomologists to know the results. In the middle of June I sent some very small larvæ of *V. Urticæ* and *V. Atalanta* to a Londoner, who had planted a quantity of nettles in his garden on purpose to rear them. By the same post I also sent some half-grown caterpillars of *V. Io*. The little ones arrived none the worse, but the others did not like being shut up in a tin, and were unable to stand when they reached their destination. The best plan in sending larvæ by post is to put them in a wooden box with some of their dry food plant, when even ventilation is immaterial. I have sent from 3,000 to 4,000 full-grown ones in this way in a box eighteen inches long, that have stood the journey perfectly.

On June 23 I had taken a hundred or two larvæ of *V. Io* from a nettle bed on which there were large black clusters of a thousand or more left, and presumed they would be there for some little time, as they were not nearly full grown. On July 2 I visited the bed intending to capture them all for the experiments in Battersea Park; but they were gone, leaving only their cast-off skins behind. What had become of them? As they had left the nettle-bed, they must have separated to pupate at a distance: they do not go underground. Next day I found nothing, merely, after a long search, coming across two other beds where there had been large colonies that also had decamped. The day after this I found three fine lots which gave me about 4,000 larvæ, as many as my larva box would safely hold.

I wonder if everybody could coax a hundred nearly full fed larvæ of *V. Io* in

a bunch into a tobacco tin without dropping one? If alarmed in the least they drop to the ground, and give a lot of trouble at the bottom of a nettle-bed. The trick is easily learned, but cannot be done without the aid of a pair of scissors.

My larva box consisted of a good sized packing-case without a lid, sunk bottom upwards three or four inches in the ground. The middle board of what was now the top was removed, and one-third of the space used as a door, the rest covered with perforated zinc, with another piece at one end close to the ground to ensure thorough ventilation. A dozen medicine bottles filled with water held the food which was supplied morning and evening, and consisted of nettles two feet long. This plan of rearing non-burrowing larvæ on the cool dry ground answered capitally. The earth neutralised all *débris;* no cleaning, beyond removing the remains of the last meal, was necessary, and the deaths in ten days' captivity were almost *nil.*

As I was leaving home, I had to send my captives off to London, just at the critical time when many were beginning to pupate. They arrived, however, quite safely, and Mr. Furneaux, in acknowledging their receipt, told me that my larva box was a "good idea," and one to which he thought of giving a trial.

Market Weston, Thetford, July, 1901. EDWARD THOMAS DAUBENY.

Flies ?—On Friday, August 23, I noticed a peculiar phenomenon which perhaps some of your readers can explain to me.

There was a thick mist early and late, which was only partially dispelled at midday by the sun and a gentle breeze from the south west. From the tops of several tall trees about half a mile distant there seemed to issue a short thin line of dark vapour, which lay horizontal and pennant-like in the direction away from the wind. At first sight it looked like the smoke from a chimney.

Farther on, at the top of a elm tree by the roadside I saw a thick cloud of what I took to be flies, and this is possibly an explanation of what I have described; but, if so, why should flies congregate in such numbers in such a position? EDMUND HORT NEW.

Green Hill, Evesham, August, 24, 1901.

Wasp.—Is it a common coincidence for a blow-fly (bluebottle) to make off after an encounter with a wasp? Yesterday I noticed a life-and-death struggle between the two insects I have mentioned, and *saw* the fly stung three times at least, after which it got free and flew off.

September, 1901. A RUGBY SELBORNIAN.

Protective Coloration in a Spider.—On June 29 I picked a spray of honeysuckle on Oxshott Common, and noticed that a bumble bee remained in one of the flowers. Looking a little more closely, I found that the bee was dead, its proboscis extended as if in the act of sucking honey from the long corolla-tube, whilst clinging tenaciously to the lower surface of its abdomen was a smooth spider, about the size of a pea—not a quarter that of the bee—and precisely the colour of the throat of the honey-suckle flower, *i.e.*, a primrose yellow. In the August number of *The Naturalists' Journal*, Mr. E. W. Swanton records what is, perhaps, the same species, *Misumena vatia* (otherwise *Thomisus citreus*, the specific name of which suggests my specimen), on *Orchis maculata*, with brown lines on its sides, which Mr. Frank P. Smith, who knows this species on great mullein, heather, roses (yellow and pink), and guelder-rose, pronounces to be "merely colour variation." The Rev. E. N. Bloomfield, Mr. Swanton says, is familiar with *M. vatia* on the ox-eye daisy. G. S. BOULGER.

Abnormal Dandelion.—A dandelion was found in the garden of Linton Court, Settle, a few days ago, which had two complete and equally sized flowers on one stalk. Each flower is in itself normal and regular; the stem shows indications, externally, of being composed of two tubes, but there is only one perforation. ADDISON CROFTON.

Settle, Craven, July 15, 1901.

Lesser Dodder discovered in Ireland.—As an example of the way in which an amateur botanist may add by observation to our knowledge of the *habitat* of a plant, I would lay before your readers the following fact: A lady, a friend of mine, living in Dublin and visiting Enniskerry (Co. Wicklow) in

August and September, began searching that neighbourhood to note the occurrence of the various wild flowers of the district, with the help of Fitch and Smith's handbook ("Illustrations of the British Flora." Fitch and Smith. 10s. 6d. Publishers: L. Reeve and Co.), in which we are accustomed to colour from nature each flower as we find it. By dint of examining the sunny grass-slopes and banks in the glen of the Dargle, she found growing the lesser dodder, *Cuscuta Epithymum* (fig. 691), parasitic on marjoram, *Origanum vulgare*, which grew profusely here, and intertwining all about *Anthemis Cotula*, and St. John's wort, *Hypericum perforatum*. This is an interesting observation, as Bentham and Hooker say ("British Flora," p. 307), that the lesser dodder is "unknown in Ireland." A botanist who has looked it up in Hooker's "Students' Flora of the British Isles," tells me that this plant was formerly known in Drogheda, Ireland.

8, *Well Road, Hampstead.* HILDA FLINDERS PETRIE.
Late Hon. Sec. Richard Jefferies Branch.

Knurs in Trees.—I should be obliged if the Editor, or any reader of NATURE NOTES, can tell me if any observations have been recorded on the cause and course of knurs.

Brighton. GEORGE MORGAN, F.R.C.S., &c.

[In his "Disease in Plants" (1901), Professor Marshall Ward writes as follows: "Burrs or knauers are irregular excrescences, principally woody, with gnarled and warted surfaces. They are frequently due to some previous injury, such as the crushing or grazing of cortical tissues by cart-wheels. The excitation of the tissues thus wounded results in the development of shoots from adventitious or dormant buds at the base of old tree trunks, or in the starting of the same process where a branch has been broken off. The new bud begins to develop a shoot, but soon dies at its tip owing to paucity of food supplies to the weak shoot, while new buds at its base repeat the process next year with the same result, and each of these again in turn, and so on. The consequence is an extremely complex nest of buds, all capable of growing in thickness and putting on wood to some extent, but not of growing out in length. In course of time this mass may attain dimensions measurable by feet, forming huge rounded and extremely hard-knotted burrs, the cross-section of which shows the vascular tissues running irregularly in all directions, and, owing to the very slow growth, extremely dense and hard. The dark spots in such sections, *e.g.*, bird's-eye maple, are the cut bud-axes all fused together, as it were. On old elms such burrs are common at heights on the stem which preclude the assumption of any coarse mechanical injury, and similar structures occur on the boles of other forest trees suddenly exposed to light by the felling of their companions, which suggests that these epicormic shoots result from some disturbance due to the action of light."—ED. *N.N.*]

A Moss with Metallic Lustre.—In a cave, which looks as if it were partly artificial, and the front of which has been walled in leaving only a door-way, grows a moss which in spots and patches shines with a bright metallic lustre. The moss on closer examination looks like small scales, and in places, as if it were the undergrowth of a longer moss—this longer moss does not grow all over the whole space nor can the metallic lustre be seen all over the patch of moss, but only in places, and the brightest spots seem to be in crevices in the stone. I have brought a bit out into the house, but cannot succeed in seeing the lustre when the moss is removed from its native spot. Is the plant known to science? and is it not of very uncommon occurence? The place where it grows is in the grounds at Oakley near Market Drayton, the seat of Sir George Chetwode, the rock on which it grows is a light red sandstone, apparently very soft and friable. It would be interesting to know whether it has been noticed in other places. Certainly I have never heard of, nor seen anything like it before. I have called it a moss for I am not botanist enough to know whether it is a moss or a lichen. It is a very green plant and the lustre just like the green metallic lustre on the throats of some humming birds. C. E. MEADE-WALDO.

The Gables, Wirksworth, August 31, 1901.

[The moss is identified by Mr. Gepp, of the Natural History Museum, as *Schistostega osmundacea*. It occurs in caverns in several places in England.—Ed. *N.N.*]

ANSWERS TO CORRESPONDENTS.

E. M. Beechey.—(1) Saltwort, *Salsola Kali*. (2) Sea Rocket, *Cakile maritima*. (3) Sea Bindweed, *Volvulus Soldanella*. (4) Crabweed, *Atriplex portulacoides*. (5) Hare's-foot Trefoil, *Trifolium arvense*. (6) Sea Purslane, *Minuartia peploides*. (7) Lady's Bedstraw, *Galium verum*.

SELBORNE SOCIETY NOTICES.

Selborne Saturday Afternoons:—

October 12.—Fungus Foray (in conjunction with the Essex Field Club). Book to Loughton by the 2 p.m. or any other train, from Liverpool Street or Fenchurch Street. Return fare, 1s. Headquarters, King's Oak, High Beach, where a meat tea, price 2s. 6d., will be provided. Guide, Mrs. Percy Myles.

October 26.—Meet Mrs. Percy Myles at 2.15 p.m., at the principal entrance gate to the Royal Botanic Gardens, York Place, Regent Park, N.W. The guide will be provided by Mr. Bryant Sowerby, Secretary to the R.B.S.

New Members.—Geo. Atkins, Esq., St. John's Wood; Thos. C. Hastings, Esq., Purton, Wilts.

Donations and Subscriptions.—The Council begs to acknowledge with thanks the receipt of the following donations:—Mrs. Picton Turbervill, 10s.; A. A. George, Esq., £1 1s.; and the following subscriptions over 5s.:—Philip Marsh, Esq., 10s. 6d.; Geo. Atkins, Esq., 10s.

The Librarian acknowledges the receipt of "Bird-Watching," by Edmund Selous, presented by the Editor.

NEWS FROM THE BRANCHES.

Richard Jefferies (Worthing):—Mr. W. Dixon of "Dartford," Homefield Road, Worthing, has been elected to fill the office of hon. secretary, following the resignation of Miss Hills.

Bath.—It is announced from this branch that Mr. C. Ellwood, 8, Bennett Street, Bath, has been elected hon. secretary, *vice* Mr. M. H. Scott, who resigns.

Council Meetings.—The next meetings of the Council will take place at 20, Hanover Square, W., on Tuesdays, October 1 and 15, and November 5, at 5.30 p.m.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 16, Mount Ararat Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, Mr. R. MARSHMAN WATTSON, 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 143. NOVEMBER, 1901. Vol. XII.

SELBORNIANA.

The United Devon Association and the Protection of Wild Plants.—This admirable organisation is doing everything in its power, especially by appeals in the advertisement columns of the local press, to discourage the wanton destruction of wild plants and to secure the co-operation in this endeavour of occupiers of land, magistrates, local councils, and the police. Encouraged by this local Selbornian activity, the Council of the Selborne Society has under consideration the possibility of legislative action in the matter.

The Bird Protection Acts.—Mr. Percy Clark writes:—

"A correspondent in Nature Notes for October, 1901, writes as follows, regarding the Bird Protection Acts: 'The existing law is nothing more than a ridiculous farce.' The following experience of my own, I fear, bears witness to the same. On June 16 last, I sailed in a small yacht from Southend to Tantlett Creek on the opposite coast, and anchored there. I soon became aware that on a pretty piece of sand and shingle, on the Isle of Grain side of the Creek, there was evidently a little colony of the lesser tern breeding; and I also became aware of a party of two gentlemen, a lady, and two boys, carefully pacing the sands and occasionally stooping down to pick something up. In much anxiety I hastily landed, and found my worst fears were realised, for one of the gentlemen exhibited with much pride, two handfuls of eggs. I remonstrated rather brusquely, and my remarks were very badly received; but the mischief was done, and after they had gone, a long search was rewarded with the discovery of only two more nests, and two young ones. Now, Sir, these ruthless robbers were educated gentlemen residing at Southend, and even if the boys had been anxious to obtain an egg or two as specimens, there was no need at all to decimate the tern colony in the heartless manner they had done. If the upper classes set such an example, what can we expect from those in lower positions? The little terns are becoming rarer every year, but the persecution still continues. Would it not be possible for the Kent naturalists to do something to prevent it at Tantlett Creek, viz., a notice board on the shore, or a watcher hired from the neighbouring village of Grain? Perhaps a note in your journal may have some effect."

The Country Month by Month.—The new one-volume edition of this work, by J. A. Owen and G. S. Boulger, is announced for publication on November 1.

CAPE FLOWERS.

By Mrs. Wilfred Durrant.

THE shelves of our greenhouses and conservatories are full of many beautiful flowers and plants, whose original homes may be many hundred miles distant from England. All the countries on the globe have contributed their quota to our floral wealth, and as we explore new continents and colonise new districts, so do we find a new and distinct set of plants, which by artificial means and care may be made to flourish in our little island.

South Africa has furnished not only a goodly number of plants but also some of the most fragrant. Heaths were brought over by the earliest explorers; and pelargoniums, cinerarias, and new and beautiful varieties of lobelias and marigolds. Besides these more familiar plants, the steady stream of greenhouse favourites has not ceased from the middle of the eighteenth century. The list is always being increased, both by diligent flower lovers and by the enterprising and energetic agents of the great nurserymen.

One of the most common flowers of the Cape is the Cape everlasting-flower, so widely known as *Immortelles* and used so much for funeral wreaths. I think I was never so struck by the flower, as when it was forced on my notice by its profusion, mixed with box twigs, on the graves in Perè la Chaise. A great quantity of these *Immortelles* are exported and find a home in France. There All Souls' Day is the great festival for remembering the dead by means of these wreaths and crosses. The little heads of flowers are the dried chaffy blooms of *Helichrysum arenarium*, a hardy plant of the daisy tribe. It was introduced to Europe about 1739. It is most abundant at the Cape, loving the sunny sandy soil, and nearly as ubiquitous there as our bright little daisy in England. The old writer, Theophrastus, mentions the plant.

The African lily, or *Agapanthus umbellatus*, is a fairly common plant now among us, sometimes planted out in our gardens, at other times in large tubs or boxes. Its fine head of cornflower-blue blossoms on a long slender green stalk, towering from encasing folds of sword-shaped leaves, is generally known. It is said to have been cultivated in the Royal Gardens of Hampton Court Palace, as early as 1692.

The golden Tritonias are very often seen in bunches in the florist's windows. The flowers are of a fine burnished copper-coloured ground, shading off to pale citron-yellow. The truss, as the technical term is for the spike of blooms, consists of a few loose blossoms with plume-shaped buds on a long thin slender stalk surrounded at the base with graceful lance-like leaves. The name Triton comes from the Greek for weather-

cock, as the stamens hang out from the cups in most inconstant directions. It was introduced to Europe as late as 1846.

The Torch lilies, flame lilies or Tritomas, are often known as "red hot pokers," from the fiery glowing spike of flowers rising from a group of narrow rigid three-edged leaves. The plant was originally called Kniphofia, from Johann Hieronymus Kniphof, a Professor of Medicine at Erfurt, about 1750. There are only about sixteen species of Tritomas, all natives of South Africa and Madagascar.

The delicate creeper of our greenhouses, the Cape leadwort, is *Plumbago capensis*. Its name is said by some to be derived from the blue of its flowers, not unlike the colour of pure lead. Others say that a decoction of the plant is made which is good for the eyes. The flowers are loosely aggregated together, of a soft azure blue colour, mid-veined with violet. The stem is angular. It was introduced to Europe about 1818.

The *Ixias*, or Corn lilies, have attracted some passing notice of late years, as having been worn by some of the ladies attending Queen Victoria's Drawing Rooms. They are sun-loving plants with red flowers, ranging from pale salmon pink to the most glowing red, lily-like in form, and rising from sheaths of slender green spears. There are about twenty-five species, all natives of South Africa. Our earliest importation was about 1757.

The *Lachenalias*, or Cape cowslips or Leopard lilies, are only similar to our well-known cowslips in their colour. They have not Shakespeare's "rubies, fairy favours" in their gold coats, however. They are liliaceous plants, the yellow flowers, shading off into flakes of darker orange, hanging loosely from the green stem. The leaves are large, thick, glossy, and fleshy, and often richly coloured. Jacquin described them as *Lachenalia*, in honour of Wernerus de La Chenal, a Swiss botanist.

The headquarters of the *Gladiolus* are in South Africa, although we have received plants from various other regions of the globe. We have so many garden varieties, and so many flowers exposed on the street stalls, that we need hardly allude to more than the deep scarlet beauty of the *Gladiolus cardinalis*. This is a Byzantine species, brought from Turkey in 1629. The parrot-like variety of our mid-summer flowering is a native of Natal. Our earliest importation seems to have been about 1774.

The snowy-white racemes of flowers of the greenhouse varieties of the Star of Bethlehem had their original home at the Cape. Gerard speaks of "wilde felde onions called Starres of Bethlehem," so that the genus, which really belongs to the onion tribe, was known in Europe some time before the Cape sent its contribution. Our earliest note of the Cape importation is in 1774.

The *Crinums* are lilies, with beautiful bell-shaped flowers of various colours, mostly a bright red. One of the finest species, *Crinum Moorei*, was only introduced from Natal as late as 1874. Our earliest knowledge of them seems to have been in 1752.

The Cape primrose, or *Streptocarpus*, was introduced from the Cape in 1824. Its blossoms are trumpet-shaped, of lavender, purple, or bright blue colour. Its stems and leaves are woolly with short hairs, while the leaves spread from the root, somewhat similarly in habit to our own "pale primrose."

The *Strelitzia* has a fine showy flower, known as the "Bird of Paradise flower," or Bird's-tongue flower. It was named in honour of the wife of George III., Charlotte, of Mecklenburg Strelitz, about 1773. The seeds are a favourite article of food of the Kaffirs. A dried specimen of the flower is to be seen in one of the show cases of a bay on the right hand side of the entrance hall of the Cromwell Road Natural History Museum.

South Africa is also the home of a great variety of plants with succulent and fleshy leaves. Many of the Aloes are natives of the Cape. Their leaves are thick and fleshy, arranged in the form of a rosette, and armed with thick marginal prickles. Our earliest note of this group is the *Aloe vera* in 1596.

The most noted of the Cape succulent plants are perhaps the *Mesembryanthemums*, or Fig-marigolds. A fairly familiar specimen of these plants in our conservatories is the Ice-plant (*M. crystallinum*), its foliage covered with ice-like globules. The whole family comprises plants of the oddest character, mostly with big showy flowers of the most brilliant hues. They only, as a rule, expand in sunshine, and are therefore (true to the derivation of their name) "mid-day" flowers. The leaves of some species are "round and solid as a pear; some as nuts, berries, puffballs, or figs; others with tooth-fringed leaves bear a resemblance to the jaws and teeth of wolves, mice, tigers, cats, &c., and after which they are named. Other species resemble horns, sickles, or half-moons, and many other singularities may be found among them." Our earliest acquaintance with these strange plants dates from about 1696.

Then the *Crassulas*, *Stapelias*, *Cacti*, *Euphorbias*, hothouse species of the wood-sorrels, arum-lilies, mimosas, gardenias, tuberoses and disas, or terrestrial orchids, are very characteristic of the Cape vegetation.

It is evident therefore that we owe a great many of our favourite flowers to the South African regions. For many years the native tribes and the jealousy of the Dutch Boers prevented the march of exploration. As brighter days dawn over the country and the freedom of the British flag spreads over wider and wider areas, we may hope to extend the number of our floral treasures, and to glean yet more beautiful varieties of many of our most familiar and best-loved plants.

ON BIRD SUPERSTITIONS.

EVER since the days when the phœnix, the bird which lived for five hundred years, and from whose ashes a young phœnix arose, puzzled my brain and severely tested the resources of my Latin dictionary, I have been deeply interested in bird superstitions and curious fancies about birds. Of course, years ago there were many more superstitions than at present, but still it is surprising what a number are yet to be met with. I have omitted the very old ones and a good number which are too local to be of general interest.

Perhaps no family has more superstitions connected with it than the Corvidæ, and foremost amongst these comes the magpie, who has so many that it is quite difficult to make a fair selection. Generally he is considered as unlucky, and has full powers of ill-wishing, but in Cornwall he is looked upon as decidedly lucky, and there is a custom, which is, however, very local, of spitting on your boot at the sight of one. This being a rather undignified, as well as a difficult performance on a windy day, it has been changed by some to doffing the hat. An odd number of magpies is unlucky, but an even number is lucky.

For very many years the raven has been considered a bird of ill-omen, and his hoarse croak has conveyed many warnings to those who believe in such things. I have heard of instances in which persons have actually abandoned a project simply because a raven has flown across their path.

The chough also has an evil name, and is said by Carew* to be rather dangerous, "in carrying stickes of fire." I suppose this refers to its red beak and legs.

The French naturalist, Buffon, discovered that the beak of the crossbill was "an error of Nature rather than a permanent feature." Those who have read Carew probably remember the quaint old passage about the crossbills which came into Cornwall about the time he wrote. "It was taken at first," he says, "for a forboden token" (whatever that may mean), "and much admired, but, soone after, notice grew, that Glocester Shire and other Apple Countries, have them an over-familiar harme." To my mind it always conjures up a picture of some rosy-faced old farmers watching their apples being destroyed, and standing with open-mouths watching the "forboden token." But presently, when they learn from their rivals in other countries that the token is but an "over-familiar harme," and that powder and shot, or whatever were the means of destruction in Cornwall in those days, will really effect a cure, they rush off at top-speed, each for his favourite blunderbuss, and try to save what they can of their crops.

Perhaps the most amusing of all superstitions is that of

* "The Survey of Cornwall," by Richard Carew. 1602, 4to.

Pepys, concerning the skylark. He says that when a snake sees a skylark singing he gets underneath and opens his mouth wide, at the same time fascinating him with his eyes. The skylark gradually circles downward, being so under the fascination apparently as to be unable to stop singing; and, when he gets close, the glare of the snake's eye becomes too much for him, and he drops into the snake's mouth and is devoured, and the snake moves on to the next lark. This, he says, accounts for the sudden ceasing of the lark's song when he gets near the ground—a very interesting explanation.

I believe that the robin is in some places considered a bird of ill-omen, for what reason it is not exactly known. He certainly looks quite the contrary with his red waistcoat and bright eye. There is another superstition which affects both the robin and the wren.

"Kill a robin or a wren,
Never prosper, boy or man,"

runs the very old couplet. It is quite refreshing to come across a superstition which has some sense in it, as I know that it has saved many a bird from death at the hands of young urchins with catapults and other weapons of rather uncertain character, who are too young to ridicule the superstition and really believe that if they kill either of the birds I have mentioned some dreadful calamity will overtake them. One thing is quite certain, that those who see any sport, or "fun" as they call it, in destroying two such perfectly harmless and beautiful little creatures as robins and wrens, certainly never deserve to prosper. I think the wren is (or was) considered unlucky in Ireland.

The nightjar has created quite a scandal, as he is supposed to suck the udders of goats, hence the name "goat-sucker." I think this is about the most absurd of all superstitions and, unfortunately, it has led to many birds being shot and many eggs destroyed by people who will not take the trouble to enquire as to its accuracy. What the nightjar lives on in districts where there are no goats, the superstition does not explain.

The owl (usually the barn owl) is another bird of most sinister reputation. He, like the bad fellow he is, cannot allow people to die in peace, but hoots at the window of the sick room and taps the window frame. This must be extremely disconcerting to the poor sufferer. Personally, I am afraid I should have the bird shot and so have a companion in affliction, if I believed in this superstition.

The swan "floats down the river to die, singing sweetly." He must have a very fine sense of humour to sing at his own funeral, so to speak. This is a very poetical idea, but I am afraid, that like some other poetical ideas, its accuracy is not beyond impeachment, but this is easily got over by a pleasant little fiction known as "poetical licence."

There are many other superstitions, of which a passing

glance must suffice. Thus, swallows were formerly supposed to gather together in "lumps" and fall into the water, and there pass the winter in torpitude — a most unhealthy practice. Dippers lay their eggs under water. The eagle is the only bird which can look in the eye of the sun. I suppose all other birds carry the conventional piece of smoked glass tucked away under their wing for this purpose. The cuckoo changes in the winter to a hawk. The hoopoe is unlucky, and in Sweden presages war. The wall creeper only lays its eggs in skulls. The crow, "the great black crow," lives for "a hundred years and mo'."

I suppose nearly every district has some superstitions peculiar to itself and I think a full list would be most interesting reading, but I must conclude this extract from my own list with one about the bernicle goose. "It is held," says Carew, "that the Barnacle breedeth under water on such ships sides, as have beene verie long at Sea, hanging there by the Bill, until his full growth dismisse him to be a perfect fowle, and for proof, hereof, many little things like birds, are ordinarily found in such places, but I cannot heare any man speake of having seene them ripe." I have seen a good many barnacles, but have never yet seen the variety mentioned by Carew "like a bird," nor, to the best of my knowledge, has anyone yet seen them "ripe"; but many years ago this was a popularly accepted theory and the name of barnacle has still adhered to the birds whose offspring are so capricious.

ARTHUR HEXT HARVEY.

5, *Trewartha Place, Penzance.*

CISSBURY.

ONE dull August afternoon last summer, I found myself walking along a country lane towards the Downs behind Worthing. The hedge-sparrows were making a loud and vulgar chattering in the hedgerows, while swifts flew low over the fields to catch their meal of flies. I still pursued my way, the lane now slightly rising and fast becoming nought but a foot track. After passing through a copse, the downs opened out before me, sweeping away up to Cissbury itself. After toiling uphill for about a mile among furze bushes, rabbit burrows, and large bits of chalk, the only thing which breaks the silence being the bell of the leader of a flock of sheep, a deep ditch is reached and beyond this a mound. On climbing the mound we see that it encloses an area of about sixty acres, on the very top of a hill. This is the Roman camp of Cissbury, or Cissa's beorg, one of the most complete in existence. Now looking on the vast panorama stretched around and below us, on the extreme west we see the tall spire of

Chichester Cathedral, bathed in the feeble sunshine which peeps from the heavy rain-clouds. Beyond the spire is the dim outline of the Isle of Wight. Gradually turning towards the north we see down upon down stretched before us as far as the Hog's Back and Hindhead, in Surrey. In the middle distance is Chanctonbury Ring. Again, turning to the east we see Brighton, and then the long white line of cliffs which terminate at Beachy Head. I have not yet mentioned any birds or insects, but Nature was not asleep, for besides the sparrows and swifts which I spoke of before, I noticed several starlings and blackbirds, thrushes, and a corn-crake (?); and as for insects there were one or two belated fritillaries, blues and meadow browns, and one or two early moths. It is now time to turn homeward, so having walked round the ramparts we slowly wend our way home to Broadwater.

"A Rugby Selbornian."

REVIEWS AND EXCHANGES.

North American Fauna, No. 20. *Revision of the Skunks of the genus Chincha.* By Arthur H. Howell, U.S. Department of Agriculture, Division of Biological Survey. Washington, 1901.

This is another of the thorough pieces of work for which we are indebted to the officers of the United States Department of Agriculture. It deals with the seventeen species of the exclusively North American genus *Chincha*, separated by Lesson in 1842 from Cuvier's *Mephitis* to include the large striped skunks. A new sub-genus, *Leucomitra*, a new species *C. platyrhina*, and two new sub-species, *C. occidentalis major* and *notata* are described; thirteen skins and eight skulls are admirably figured, the new species, however, being regretably omitted; and full synonymy, and distributional notes are given, with some measurements and a table of those of the skulls. As we have said on previous occasions, when noticing this series, we should have been glad of furthur details as to the general anatomy. These large skunks are wholly terrestrial, living mostly in caves and feeding largely on insects, such as grasshoppers, but also on birds' eggs, and on small mammals, reptiles and batrachians. Between 1850 and 1890 the Hudson Bay Company shipped over 250,000 skunks skins to England; but Mr. Howell states that "skunk farms" for breeding these animals have of late been started in several States.

North American Fauna, No. 21. *Natural History of the Queen Charlotte Islands, British Columbia, and of the Cook Inlet, Alaska.* By Wilfred H. Osgood, U.S. Department of Agriculture, Division of Biological Survey. Washington, 1901.

These memoirs are the results of reconnaissances by Mr. Osgood and his assistant Mr. Edmund Heller, made between June 13 and July 18, and between August 21 and September 28, 1900. The report is illustrated by a map of the Queen Charlotte group, eight landscape views, and figures of the skulls of *Ursus carlottiæ* and *americanus*, and *Mustela caurina* and *nesophila*, the former of these bears and the latter of the martens being here described for the first time. Some account is given of Mr. Seton-Thompson's new species of caribou, *Rangifer dawsoni*, and a new species of mouse from Prevost Island, *Peromyscus prevostensis*, two new sub-species of *Sorex longicauda*, a new woodpecker, *Dryobates picoideus*, and several new sub-species of birds are among the results recorded from the Queen

Charlotte group; and a new vole, *Microtus miurus*, and another shrew, *Sorex eximius*, are described from Cook Inlet. But little previous work having been done in the latter region, an attempt is made at a complete enumeration of the mammals and birds, but only a few of the larger plants are recorded. In the Queen Charlotte Islands, however, the explorers acknowledge the important work done by the late Dr. George Dawson, in 1878 and 1879, and give a fuller list of plants and also one of fishes. These, however, are mere lists, without notes or any collation of previous work, whereas the mammals and birds are more thoroughly treated. Excellent as preliminary sketches of the natural history of the districts, these memoirs are thus obviously incomplete.

The Old Zoo and the New. By Edmund Selous. (Reprinted from *The Saturday Review.*) Humanitarian League, 1901. Price 2d.

"Glaciers move: why should not the Society? We can imagine that within a period not longer, perhaps, than has been slept through by some of the more ancient mummies in the British Museum, a change may have taken place." Such is the severe language used by Mr. Selous of the management of the Zoological Gardens in the matter of cages, dens, &c., or, as he terms them, "The Bastille of the Beasts." Mr. Aflalo and others have shown that individual Fellows have practically no voice in the management of the Gardens; but it is to be hoped that a sufficient number of them will combine to make their opinions felt at the Annual Meeting, or in other constitutional ways, so as to bring about some reform.

A Ready Aid to Distinguish the Commoner Wild Birds of Great Britain. By David T. Price. Gurney and Jackson, 1901.

There can be little doubt as to the need of some such a handbook as this. "There must be many," says the author in his Introduction, "who would like to be able, in their country rambles, to recognise the birds"; and, he adds, "it is hoped that this little book, carried in the pocket . . . may prove a knowing companion and simplify the process." The book contains very brief—too brief, we fear—descriptions of about one hundred of the commoner species, "written specially for the observer with a field-glass," together with an index in which the birds are grouped into those of the garden, the woodland, cultivated and uncultivated lands, the sea-shore, inland water-side and aërial. Each of these groups is then subdivided into those larger than a thrush, of the size of a thrush, smaller than a thrush but larger than a sparrow, of the size of a sparrow, or smaller than a sparrow; and these sub-groups are again divided into a summer and a winter column, and two words as to colour added to each name. There are but sixty pages to the book and its cloth cover is light and flexible; but why have the publishers made a pocket book 19 cm. high by more than 12 cm. wide?

The South-Eastern Naturalist, being the Transactions of the South-Eastern Union of Scientific Societies for 1901. Edited by J. W. Tutt, F.E.S. Elliot Stock. Price 2s. 6d. net.

In addition to 35 pp. of matter dealing with the Congress at Haslemere, and 5 pp. devoted to the too brief list of members, this Report contains 55 pp. of matter of more purely scientific interest. When we say that the subjects dealt with include the address of the President, Mr. G. A. Boulenger, F.R.S., on European herpetology during the last quarter of a century, the adaptation of seedlings to their surroundings, forms of moisture in the atmosphere, cuckoo's eggs, the origin of the dead-nettles in Britain, the total eclipse of the sun in 1900, Nature-knowledge in elementary schools, the Local Corresponding Secretaries of the Selborne Society, and the influence of use upon structural modifications, it will be seen that the Union appeals to every one of scientific tastes in the south-eastern counties.

Eighth Annual Report of the Church Society for the Promotion of Kindness to Animals for 1900. Church House, Westminster.

We are glad of help to the cause of humanity from all quarters, though we doubt the necessity of multiplying societies on a sectarian basis, especially when salaries and travelling expenses swallow up half of an expenditure of £800 a year.

The Society seems to have done some good work during the year, especially in conjunction with the efforts of the late Mr. Laurence W. Pike to extend the Geneva Convention to veterinary surgeons and lessen the sufferings of horses in war.

Report and Transactions of the Ealing Natural Science and Microscopical Society for 1900-1.

This is the twenty-fourth annual report of this flourishing Society. The eleven papers read during the session were none of them on local subjects, and dealt with widely diverse topics, such as the solar eclipse, the moon, Röntgen rays, underground temperature, and a visit to South Africa, besides biological matters. They are all printed in abstract in the *Transactions*; and as they, very rightly, do not appear to embody any novel results of original research, this method of publication need give no trouble to the working naturalist, whilst as a memento for the members it is all that can be needed.

Received:—*The Victorian Naturalist* for September; *The Naturalist, The Naturalist's Journal, The Irish Naturalist, Science Gossip, Humanity, Our Animal Friends*, and *The Agricultural Economist* for October; and *The Animal World* for September and October.

NATURAL HISTORY NOTES AND QUERIES.

Mad as a March Hare.—The funniest experience that I have ever had with animals occurred last evening. I have, when shooting amongst fern, had a rabbit bolt through my legs, but that is a small matter. Yesterday I had been fishing in the Rhone Valley, and meeting a friend by the river side, I went to his house at Aigle for a somewhat hasty supper. Walking quickly down hill to the railway station at a few minutes before 8 o'clock, the moon shining brightly and less than half full, I was passing along a road about fifteen feet wide, with walls on either side enclosing the most famous vineyards in the Canton de Vaud, and at about 100 yards from the open fields. I was holding my left hand pressed tightly against the front of my body, just below the ribs, to assist me. On the little finger were two gold rings and below my hand was a small gold watch-chain from which hung the much-admired badge, in silver and blue enamel, of the Selborne Society. These things probably glistened in the moonlight, which shone from my right half front. I was wearing grey cricket trousers of about the same colour as the walls and a light slate-coloured coat and waistcoat: hat almost the same. Presently I became aware of an animal coming towards me, which in a second of time sprang up and struck me fairly on the left hand and centre of the body. I felt the soft fur, and as she fell back and ran down the road I recognised that it was a frightened hare that had executed this extraordinary manœuvre.

In the *Fliegende Blätter* (the German *Punch*) the hare is credited with doing all kinds of strange or wise things, and had one of the artists on the staff of that amusing journal been in my shoes last night no doubt we should have an interesting picture of what happened, and it would be explained that the hare, recognising in me a sympathetic person from my wearing our badge, wished to make my acquaintance in the way I have described. However, the real reason for what happened is to me a mystery, and I expect will long remain as such. I have no doubt some of your readers can tell of more extraordinary adventures. Had my right hand been disengaged—it was carrying my fishing-rod—I might, perhaps, have caught the hare.

GILES A. DAUBENY.

Montreux,
September 20, 1901.

[Captain Daubeny's experience recalls that of St. Anselm, but the hare, in that case, was being hunted and in broad daylight, while the Saint did not wear the badge of the Selborne Society—save in his heart.—ED. *N. N.*]

Continental Forests: Black Squirrel.—I have before mentioned (*see* NATURE NOTES, vol. vii., p. 166) that, so far as seeing wild animals is concerned, a walk in a public forest on the continent of Europe is not always satisfactory. In private forests, or in royal preserves in Germany, of course, the case is quite different, and in them abundance of game is to be found. I spent two months this summer in the Austrian Tyrol, in the neighbourhood of Innsbruck, and was much in the forests. I kept my eyes looking well forward, according to my invariable practice, hoping to see a chamois in his native haunts. In this, however, I was disappointed, and the only chamois that I saw was a dead one slung across the shoulder of a sportsman who was returning from the chase at seven o'clock one morning. I saw no live game whatever till within a few days of leaving. I had been with a friend to make the ascent of the Waldrast, which, however, we could not accomplish owing to bad weather, and as we were nearing home and had entered the Ahrenthal, where there is some nice grazing ground in the midst of the woods, we noticed a hare going along a grass road, and were quite pleased to see something larger than squirrels and mice. Presently we started three more hares who made off at our approach. It was getting dark, but at a distance of 200 yards or more we could distinguish a few roebuck, who also darted off to cover. After going a bit further I heard a rustle amongst the bushes close beside me and up jumped a fine buck, who went straight up hill offering a fine chance to be shot through the back. A Zulu would have had his assegai through him. My friend told some Baurs at the village where he lodged what we had seen, and as a consequence a fine roebuck was brought in a day or two after.

One of the most interesting objects that I found in Tyrol was a wasp's nest, hanging amongst the twigs of a small birch tree at about three feet from the ground and quite close to a path where people were constantly passing. Of butterflies I saw a great many, and of species I had never met in England—some very beautiful.

Back here in Switzerland, living well above Montreux and surrounded by vineyards, it is yet almost an hour's climb to get to the forests on Mount Cubly. I had not been there for twelve years, and when there last the science of forestry was quite out of my ken. Yesterday I thought I would go and see again the fine pines up there, and certainly very fine ones they are. Where I was in Austria they were cutting over different portions of the pine forests at an age of 80 to 100 years or thereabouts; here the trees have gone a longer time, but fellings are now taking place.

Leaving the pines yesterday, I was skirting a mixed wood of deciduous trees and small firs when I came across an animal quite new to me, though I had read of his existence—a black squirrel. He was gnawing a fir cone on the ground and went quietly with it in his mouth across the path and up a tree just in front of me. It was a bright clear day so I observed him well. His fur was quite black. I could not call it jet black, for there was no gloss on it; it was what I should call an inky black. Under the body the colour changed to a dusky brown. Altogether he presented a funereal appearance, and I cannot consider him an improvement on the pretty chestnut-coloured individual we are all accustomed to see. Although I had never seen a black squirrel before, this animal does not appear to be very scarce about here, for a friend tells me that he saw one not long ago near Aigle. I suppose the black coat is to harmonise with the sombre pine forests and is for the protection of its owner. I should be glad to hear if the black squirrel is to be found in England.

Montreux, GILES A. DAUBENY.
October 11, 1901.

Black Squirrel.—In crossing Barmby Moor Common (2 miles from York), which is covered with heather, dotted with fir and silver birch, I saw a squirrel, dark brown, approaching black. The tail seemed quite black, very wide and fan-like. I have seen hundreds of squirrels in Cornwall, some lighter and darker than others, some with white feet and some with the tip of the tail white, but I never saw one so nearly approaching black. I should like to know if they are rare. I may add that as it went up a rather small isolated silver birch I had a long and close view of it.

September 27, 1901. W. D. WOOD REES.

Hedgehog.—A gentleman I know was attracted by the cries of a hen, evidently, as it proved, in dire distress. On reaching the spot he found that the bird had been seized by a hedgehog, who was rapidly devouring its "vitals." The hen was too far gone to save its life and I need hardly add the hedgehog had to propitiate for the crime. If I did not rely absolutely on the truth of this statement I should never have believed it.

Rhyl, F. L. RAWLINS.
September 15, 1901.

Hedgehog and Toad.—A month or so ago I had three young turkeys killed by a hedgehog. Setting a box-trap baited with the remains of one of them, I caught the culprit next evening, my children subsequently keeping it as a pet. During its captivity (it escaped one night by lifting the lid of its box, which was heavily weighted), it devoured a great quantity and a great variety of food, from sparrows' eggs to kittens: nothing seemed to come amiss in the meat line, frogs and toads being apparently equally relished. The latter seemed to have no evil effect. This somewhat surprised me, as I once had a young fox terrier so badly salivated by mouthing a toad that I was afraid it would go mad. It scratched its mouth with both front feet and actually "wallowed foaming." Dry earth, perhaps, would have been as good a remedy, but I put it under the pump, and subsequently washed its mouth well out with alum and water, and in a few hours it was practically all right again.

Brunstead Rectory, Norwich, M. C. H. BIRD.
September 14, 1901.

Vertebrates of Hertfordshire.—I am collecting notes respecting the vertebrates of Hertfordshire and should esteem it a favour if any Selbornians having any interesting particulars with regard thereto, would kindly favour me with the same from time to time.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
October 11, 1901.

Provincial Name of the Heron.—Mrs. Hubbard's note hereon in the October issue prompts me to send the following local and provincial names from my little "Handbook of British Breeding Birds," thinking they would interest her and other Selbornians: Hanser, harnsea, hearinsew, hegrilskip, hern, heronshaw, heronswegh, jack hern, long-necked heron, and moll hern.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
October 11, 1901.

Provincial Name of the Heron.—Mrs. Hubbard's interesting note leads me to see that there is more method than madness in the Staffordshire pronunciation of the word heron, viz., "yarn"—an even greater corruption of the French than "harnser."

Sidmouth, WILL. V. VICKERS.
October 5, 1901.

Pigeon with Odd Eyes.—The note in the October issue regarding this reminded me to turn to my Diary for 1900, where, under date of July 15, there is the following entry: "Also noticed a fine ring dove which had been caged five years. He was in splendid fettle, but blind in one eye; at least, one was black and the other yellow." This bird was caged, as my entry states, and I took it for granted that the bird was, as I was informed, really blind. This may interest Miss Caroline E. Farley.

St. Albans, Herts, W. PERCIVAL WESTELL, M.B.O.U.
October 11, 1901.

Notes on Birds, &c., in Switzerland.—Gulls take their prey at the surface of the water in the mouth, but the osprey grasps the fish with his claws. Neither of these birds fly beneath the surface of the water, but cormorants, guillemots and the diving birds generally do: they have very narrow wings, and when flying in still air move the wings quickly, but much slower in water. Yesterday afternoon I paid a visit to the *vallée de la Tinière*, where two avalanches

have come down. The principal one was in the same place as I saw one twelve years ago, but this time the mass of snow is enormous, many thousands of tons. A remarkable thing about this avalanche is that the trees above it do not appear to have been in the least damaged.

Montreux, GILES A. DAUBENY.
April 12, 1901.

Gunners or Wraiths?—The paragraph with this heading, sent me from a local paper of last autumn, has been copied by several London daily papers, in one of which a writer replies to it, pointing out that the birds had always been in the habit of flying over the house, and that they certainly have not disappeared. The story would seem, therefore, to be imaginative.—ED. *N. N.*

Martins and Swallows.—A great deal has been written on the scarcity of these birds during the past season. My observations are that we have not had the usual quantity of swallows, and that house-martins have been quite as numerous as last year. There have been thirty-two nests of martins built or occupied, and about ten of the number have been occupied by house-sparrows, in addition to the usual boxes fixed under the eaves of buildings, where they can be robbed or left according to inclination. None have been robbed this season.

J. HIAM.

A Black Bullfinch.—In a letter dated March 30, 1768, the Rev. Gilbert White mentions a case of a bullfinch turning black after four years' confinement in a cage. Last autumn I caught one in the garden, and it has moulted out as black as a crow this season, except a few white feathers in each wing. Too much hemp-seed causes this transformation, although its seed was about equal parts of hemp and canary seed with plenty of green food.

J. HIAM.

Strange Nesting Places.—Having read Rev. A. F. Curtis's interesting note on the above, I thought the following finds I have made might interest your readers. The great tit seems fond of selecting strange places for nesting. I once found its nest in the barrel of a disused pump, the birds using the spout for ingress and egress; when I took the cap of the pump off I found the nest contained six fledglings crouching together, doubtless alarmed at seeing their roof disappear so suddenly. At another time I found its nest in a small boat which had not been used for a long time, and was lying on the side of a lake. The boat had a covered deck after the fashion of a canoe, and in the bow a square place was formed between decks into which a pair of great tits had found their way through a hole, and built a nest 17 inches long, 10½ inches wide, and 2½ thick, of coarse moss with a feather-lined nest cup of 2 inches in diameter at one end, and deposited seven eggs. Another nest of these birds was built on the top of an old squirrel's dray up a high tree, and can now be seen in the Hastings Museum.

I have several times found robins' nests under glass shades placed upon graves in our cemetery. Spotted flycatchers often select the carvings on monuments for nesting places here. I found one of their nests this year with a cuckoo's egg in it, built upon a metal wreath that had been tied on the front of a headstone, which was standing quite close to a frequented pathway.

I saw a spotted flycatcher on the 3rd of this month, hawking flies from the roof of the cemetery chapel. Is not this late for it to be here?

St. Helen's, near Hastings, Sussex, WALTER FIELD.
October 5, 1901.

Skylarks.—I was pleased to read what Mr. W. Percival Westell had to say about the skylark, and doubtless he will be glad to hear that there has been a considerable increase in their numbers in our locality this year. Has Mr. Westell ever noticed this bird mimicking or introducing into its song the cry of the ring dotterel? This it frequently does in the Romney Marshes.

St. Helen's, near Hastings, Sussex, WALTER FIELD.
October 5, 1901.

Birds and Insect Food.—The necessity of insect food, even to granivorous birds, is at times very noticeable, for to a great extent it provides the moisture

they require. One day the middle of harvest, when one would expect to find the finch tribe busy in the corn fields, I saw a number of sparrows surrounding a pied wagtail, which was engaged in driving them from a spot on the lawn. As soon as the wagtail rushed at them in one direction the sparrows crowded in from the other. The cause of contention was a swarm of ants in the turf. Just now many birds, such as thrushes, blackbirds and starlings, have forsaken my premises owing to the impossibility of obtaining insect food in the parched ground.

August, 1901. EDMUND THOS. DAUBENY.

Young Toads and Frogs, and their Movements.—The annual exodus of young frogs and toads from the ponds and ditches, where they have been bred, generally takes place late in the summer, or early in the autumn. The state of the weather in the previous spring probably influences the time of departure to some extent. In a cold, backward spring, the spawning season would be rather later than usual and the development of the tadpoles retarded, and *vice versâ*. The first heavy fall of rain in August generally starts them off in great numbers, though they often take advantage of earlier spells of wet weather. During the transition stage from tadpole to frog or toad, these pretty and interesting little creatures live a semi-aquatic life at the very margin of the water, where they have been hatched. Here they gradually become fitted for existence on land, passing more and more of their time out of water. The more forward individuals may be found climbing actively about the stems and blades of grass and various waterside plants, but never venturing far from their native element, unless the grass is wet with dew or rain, when they travel rather further afield. At this period of their existence they are often smaller than the tadpoles from which they have been developed, and scarcely larger than the common house fly; and the shining skins of the young toads look quite black. It is not until the tail has been wholly absorbed and both pairs of legs fully developed, that they finally leave their old home, and spread themselves abroad over the face of the country. Up to this time their minute size and the nature of their haunts has done much to shield them from observation, but once on their travels they are sure to attract attention. The sudden appearance after rain of great multitudes of these little animals about the roads and in all sorts of unwonted places, has given rise to many sensational accounts of wonderful showers of frogs and toads, supposed to have been drawn up into the clouds by waterspouts and returned to earth with the rain. The perseverance of these little fellows, shown in their determined and unwearied efforts to surmount such obstacles as bar their path, is remarkable. Their climbing powers are considerable, but the scaling of a steep bank is, nevertheless, a formidable undertaking. It is amusing to watch one of these tiny creatures, when, with his fellows, he encounters such a barrier. He applies himself to his task with great energy. Again and again, after climbing a few inches of bank, the loose earth gives way and down he comes to the bottom, but nothing daunted he redoubles his efforts, till at last his perseverance is rewarded. Having scaled the dizzy height, the whole company pass onwards to meet with and overcome other difficulties. Great numbers, no doubt, perish during their travels, being trodden to death or else devoured by ducks, fowls, pheasants, and various other birds, and also by rats and hedgehogs. I once noticed a cock calling the hens together to partake of some dainty he held in his beak, which proved to be a small toad. The young frogs requiring more moisture than toads, do not extend their journeys so far, but keep more to low lying ground and the vicinity of water. When quite young toads are lively, merry little creatures, and full of animation, but as they grow older they gradually acquire the dull lethargic temperament of the full-grown animal. After heavy rains, when the ground is everywhere sodden with moisture, adult frogs will often travel about a good deal, and are then apt to make their appearance in places where at other times they are never seen.

Blaxhall, Suffolk. GEO. T. ROPE.

Frogs Migrating.—I had written to my brother, Captain Giles Daubeny, respecting the "migration" of frogs and toads previous to seeing Mr. Westell's reference to the matter. What they noticed I have seen here year after year. I do not think it can be looked upon as a case of migration in the ordinary sense of the word. These creatures leave the water in which they were born as soon as

the tadpolean tail has disappeared, and spread over the surrounding district in all directions. When engaged in this journey these tiny batrachians are often to be met with in great numbers.

Market Weston, Thetford, EDMUND THOS. DAUBENY.
October, 1901.

Toads.—The following quotations from Buckland's "Curiosities of Natural History," 7th edition, pp. 42 and following, may interest Mr. Giles Daubeny and others.

As to bees: "A gentleman in Oxfordshire had a hive of bees in the cavity of a wall. A common toad, which had taken up its residence in a hole close by, was observed to walk forth and place himself at the mouth of the hive and to catch the bees in their coming from and returning to the hive, with much dexterity and activity," &c.

As to poison: "Like the lizards they have glands in their skin which secrete a white, highly-acid fluid, and just behind the head are seen two eminences like split beans. If these be pressed, this acid fluid will come out, only let the operator mind that it does not get into his eyes, for it generally comes out with a jet. There are also other glands dispersed throughout the skin," &c.

Toads in stone, coal, &c.: "In the year 1825 my father [Dean Buckland] tried a series of experiments [which, for humanity's sake, I trust will not be repeated]. On the 26th of November, 1825, one live toad was placed in each of twenty-four cells [twelve in Oxford oolite and twelve in compact siliceous sandstone]. On the 10th of December, 1826, not only were all the small toads dead, but the larger ones appeared much emaciated, with two exceptions [in which cases it is suspected that the cells were not perfectly closed]. Before the expiration of the second year all the large ones also were dead."

The same result followed in the case of five toads plugged up in holes in the trunk of an apple tree. Dr. C. G. B. Daubeny took part in these experiments.

I may mention that in August this year I saw some toads catching winged ants as they emerged from the ground on the lawn of a garden in Norfolk.

Otham Parsonage, F. M. MILLARD.
Maidstone.

Toads and Music.—I have read the paragraphs on toads with much interest in NATURE NOTES. I have not seen any mention in them of a toad's liking for music. An old friend of mine, now dead, used to walk in her garden on summer evenings and made friends there with a toad: she used to feed it, I remember, with crumbs of sponge-cake, and while he was eating them, she used to sing to him, to which he listened, apparently with pleasure. Perhaps some of your readers may like to try if they have any musical friends amongst their toads.

66, *Kingsgate Street, Winchester,* E. WHITING.
October 4, 1901.

A Snail Hunter; Cockchafers.—Looking over what I have said in this month's issue of NATURE NOTES, on frogs and toads as food, I am reminded how useful snails are in this sense. A few years ago I was lodging with a farmer at Wrington, in Somersetshire, and one afternoon, as I was taking a walk along the road, a man came by carrying a small sack over his shoulder, and having in his hand a short iron rod, the end of which was formed into a crook. I noticed that he plunged the iron instrument into the banks under the hedges, drawing out something which was placed in the sack. On observing him more closely, I saw that he was getting snails. I asked him what he was going to do with them, and he replied that as soon as the sack was full, he would take the snails into Bristol and sell them, as they were very good eating. The old nursery rhyme then, naturally, came to my mind, which informed us that girls were made of sugar and spice and all that's nice, whereas boys were supposed to be made of slugs and snails and puppy dog's tails, and for the first time it seemed to me that the male sex had the advantage as to material of construction. The man was very expert at his work, finding the snails by knowing likely places amongst leaves and grass, and feeling for them with the crook.

Fishing on Dartmoor I have constantly seen that after rain many large black and yellow slugs make their appearance. Perhaps these would be as good food as

snails. I should be glad if one of your readers confirmed this, and also if he would kindly tell us if puppy dog's tails are used as food? The tails are usually bitten off, and it may be that the taste acquired in that way may lead the operator to make puppy-tail soup—we all know how excellent is ox-tail soup. Personally, however, I detest the very idea even of any dog's tail being cut or bitten off, or that any animal should be mutilated in any way. The only use that I have made, as food, of snails, has been to collect them in my garden—where they do much damage to fruit and vegetables—and after cracking their shells, throw them to my ducks. Snails are much appreciated as food for man on the Continent, where they are reared in damp places called *escargotières*.

It may not be generally known that in Germany and France, cockchafers—who do great harm in the forests—are used as food for swine, fowls and geese, being mixed with potatoes or starchy material (*See* Dr. Schlich's "Manual of Forestry," vol. iv., p. 184). I was much struck, whilst walking lately in the forests of the Austrian Tyrol, with the great number of dead cockchafers that were lying upon the ground. One of the best friends of the farmer and forester, in the way of keeping down the number of these destructive beetles, is the common rook, who plunges his powerful beak into the ground and devours the immature cockchafer before he takes wing. It is very easy to find young cockchafers, as there is a small hole in the ground above them to admit air for breathing purposes. Many a time, when a boy at school have I dug them out with my pocket-knife and set them flying. I had to work by eyesight, but the rook has also the sense of smell to help him to find the rich meal that the cockchafer affords him. Rooks are far too little protected in Switzerland and Tyrol.

The mole devours the white cockchafer grubs at greater depths underground than they can be reached by the rook, who, however, gets plenty as he follows the plough. These grubs do perhaps more harm than the full-grown insects, for they feed on the small roots of trees, farm crops and vegetables. Starlings also are fond of the cockchafer grub.

Les Collordalles, Montreux, GILES A. DAUBENY.
September 18, 1901.

"**Flies?**"—Allow me to give an explanation to Mr. New. What he saw was a colony of gnats. I have witnessed many similar cases. On one occasion a friend when walking with me declared that smoke, as it looked at a distance, was issuing from the top of a tree. I told him the cause, which failed to satisfy till we went to the spot. We then saw a colony of gnats, twelve or fifteen feet long, to leeward of the tree, waving up and down with the breeze and closely resembling a cloud of smoke. In positions like this gnats often play and amuse themselves for hours.

Market Weston, Thetford, EDMUND THOS. DAUBENY.
October, 1901.

"**Flies?**"—In answer to Mr. E. H. New, the "peculiar phenomenon" which he describes is undoubtedly due to swarms of insects on the wing. Whether this vapour or smoke-like appearance, seeming to issue from tree-tops or church spires, is ever caused by insects other than ants I have not been able to find out, but that the phenomenon is often caused by winged ants appears to be amply verified, the species identified being *Myrmica scabrinodis* or one of its allies the *rugino is* or *lævinodis*.

At Great Amwell, in Hertfordshire, on a warm evening in August, I have counted as many as a dozen trees in a small fir plantation, each with its larger or smaller smoke-like pennant of living insects: these were winged ants, but I cannot say the species. I would refer all interested in this matter to a small and most interesting book by the Rev. W. F. White, M.E.S.L., entitled "Ants and their Ways." It is published by the Religious Tract Society, and on pp. 68 to 71 this phenomenon is dealt with.

Richard Jefferies Branch. E. K. LOYD.

Gnats.—If Mr. New will refer to Kirby and Spence's "Introduction to Entomology," letter four (pp. 59, 60, of the one volume edition of 1856), he will find several instances recorded of swarms of *gnats* taking the appearance of clouds of smoke. It is probable that it was gnats and not flies which caused the appear-

ance which Mr. New noticed; but it would have been more satisfactory if he could have obtained specimens of the insect for identification.

W. F. KIRBY.

Holly Blue.—This butterfly is generally more or less common at Chiswick, and I have also seen it on various occasions in different parts of Surrey, such as Oatlands, near Weybridge; and at Haslemere. Brighton collectors, however, used to consider it a rarity. I have not heard if it has been common in Sussex of late years.

W. F. KIRBY.

Death's Head Moth, and Convolvulus Moths in South Devon.—On Wednesday last, October 2, a very fine specimen of the death's head hawk moth (*A. atropos*) flew into my kitchen to the light. I secured it with the help of some chloroform, and it is evidently a very fresh and beautiful specimen. All the ten specimens which I reared from pupæ in 1858 did not come out till November, so this seemed to me a very early arrival. On September 28, a beautiful specimen of the convolvulus hawk moth, was brought to me, and another a few days previously, so they seem to be rather numerous this year.

Modbury Vicarage, South Devon. G. C. GREEN.

Vanessidæ.—It seems to me that most of the common Vanessidæ hide up for hybernation directly they have emerged from the pupa. Last spring there were more than usual hybernated *V. io*, *V. urticæ*, and *V. polychloros*. I have reared two or three hundred *V. io* in my garden, which, as the empty pupa cases in my larva box prove, passed safely through all stages of their existence. I also placed on some nettles close to my flower garden a quantity of the larvæ of *V. atalanta* and *V. urticæ*. Hardly any of these are to be seen this autumn, and I have not set eyes on *V. polychloros*. This latter is always seen more frequently in the spring than in the autumn.

Market Weston, Thetford, September, 1901. EDMUND THOS. DAUBENY.

Stray Colonies of Bees.—I am much interested in the note on p. 196. A few weeks ago I took out a portion of the brick-work in the gable end of a farm house to the extent of 3 ft. deep and 4 ft. 6 ins. wide, which was packed with combs and honey, estimated at about 1½ cwt. It was stated that they had occupied the place over twenty years. Most of the combs were 4 ft. 6 ins. long and suspended. Some of the honeycomb was very wide—about 5 ins.—as much as I could grasp. I kept the bees in subjection, without veil or gloves, for about five hours with smoker and carbolic cloths.

J. HIAM.

Hornets.—This has been the most prolific season for hornets I ever remember. Scarcely a day passed a month ago that some one did not tell me of a colony and in a variety of situations—some in the ground after the habit of ground-building wasps, one in a church tower, one in a barn suspended, one in a bee-hive, one in a hay-stack, several in thatch-roofs, some in cottage roofs under tiles, and about a score in hollow trees. Have other writers noticed in other districts any increase this season?

Ashwood Bank, Redditch. J. HIAM.

Aphis.—It is well-known that wet weather is fatal to aphis, and that dry weather gives them advantage of which, as a rule, they are not slow to make unpleasant use. This year many crops and plants have been ruined by aphis. My cabbages, French beans, and plum trees have been covered by them; even the thistles in the fields had a black mass of them five or six inches down the stem, and owing to their attacks the bean crop is a failure. As the honey season has been cut short by the drought, one would suppose that bees would have stored the honey dew produced by aphides, which makes a dark debased form of honey. At the beginning of August, however, these insects seem nearly to have disappeared, owing no doubt, to the plants being so dried up as no longer to afford them the moisture they require.

Market Weston, Thetford, September, 1901. EDMUND THOS. DAUBENY.

Protective Colouration in a Spider.—I was much interested in Prof. Boulger's note on this subject (p. 198 *ante*), and would like to mention that McCook (a distinguished arachnologist) does not look upon the colouration of *Misumena vatia* as "merely colour variation," but as alluring colouration, and, in addition, as a true instance of protective resemblance. If this species of spider be put into the centre of a *Coreopsis* flower (a usual habitat), the true meaning of its colouration becomes at once evident. I would also like to point out that *Misumena vatia* and *Thomisus citreus* are not, as Prof. Boulger's note would seem to suggest, one and the same species. The latter is of a creamy-white colour, and the contour of its abdomen closely resembles an unopened flower-bud; another, and a very good instance of alluring colouration.

J. W. WILLIAMS, M.R.C.S.(Eng.), F.L.S., &c.
128, *Mansfield Road, N.W.*

Abnormal Foxglove.—I am sending you some specimens of abnormal foxglove flowers sent to me from a cottage garden at Kingsdown, near Swindon, and also those of some campanulas (? *C. medium*) which grow near the foxglove. At p. 178 of NATURE NOTES, of September, 1900, Mr. E. A. Martin records the discovery of a foxglove, one of the flowers of which "had opened out almost exactly like a hollyhock," and suggests hybridisation with that plant; but as you pointed out in a footnote, crossing is impossible, no doubt on the ground that hybrids are not produced from plants of different natural orders.

In the frequent cases in which the corolla of *Digitalis* assumes a campanulate form, there has been for some time a tendency to attribute the variation to crossing, and in "Tongues in Trees," by the Rev. W. Tuckwell, Vicar of Stockton, Rugby, and late Fellow of New College, Oxford (Geo. Allen, 1891), I find at p. 88, the following statement: "At East Langton, near Market Harborough, foxgloves and *Campanula medium* have for years grown side by side. The two have hybridised, and the foxgloves terminate in campanulate blooms."

In the specimens I now send you, you will observe that the abnormal flowers have all the characters of *Scrophulariaceæ*, and none of *Campanulaceæ*, and they are no doubt simply malformations; but it is rather remarkable that these peculiar forms of *Digitalis* all seem to occur in gardens where other genera assort with them, and even allowing for the "tendency of irregular flowers to become regular by an increase of their parts," the reason of their particular form of aberration, which is of such frequent occurrence, seems rather obscure, and I should like to have your opinion upon it.

Are not most of these variations due to an effort on the part of the plant to secure fertilisation? According to Lubbock, *Digitalis* is exclusively fertilised by bumble-bees. Can it be with the object of offering them easier access that the corolla assumes by duplication and quadruplication, the regular campanulate form?

Dulwich, September 21, 1901. M. J. T.

[The specimens sent were far less abnormal or campanula-like than many we have seen, and certainly show no suggestion of hybridism, which is, as we have previously intimated, in this case a purely gratuitous and baseless supposition. A slight hypertrophy of the corolla suffices to render *Digitalis* nearly poly-symmetric.—ED. *N.N.*]

SELBORNE SOCIETY NOTICES.

The Selborne Society was founded in 1885 for the preservation from unnecessary destruction of wild animals and plants, the protection of places and objects of antiquarian interest or natural beauty, the promotion of the study of natural history.

Membership of the Selborne Society.—With a view to obtaining the co-operation of persons in all conditions, there is no fixed subscription, but those only who subscribe 5s. per annum, and upwards, are entitled to hold office, vote at meetings, and to receive the reports, the Society's Magazine (NATURE NOTES), and other publications of the Society. Subscriptions commence from

the 1st January in each year, but persons joining after that date are supplied with the back numbers of the magazine. A cheque or postal order for the amount of the subscription or donation, crossed "London Joint Stock Bank, Pall Mall," should be addressed to the Secretary, Mr. R. MARSHMAN WATTSON, 20, Hanover Square, London, W.

Council Meetings.—The next meetings of Council will be held on Tuesdays, November 5 and 19, and December 3, at 5.30 p.m., at 20, Hanover Square, W.

New Members.—Miss Strohmenger, Highbury, N.; Miss O'Rourke, Stroud Green; Edward Smith, Esq., Lewisham; Wm. Garfitt, Esq., M.P., Chesham Place, S.W.; O. G. Pike, Esq., Winchmore Hill; Thos. Gore Timbrell, Esq., Alton, Hants.; The Rev. Preb. H. E. J. Bevan, M.A., and the Hon. Mrs. H. E. J. Bevan, Chelsea: Captain Loyd, Worthing; Miss M. E. Jones, Hampstead; and Miss Banks, Keswick.

Donations and Subscriptions.—The Council begs to acknowledge with thanks the receipt of the following subscription over 5s: Thos. Gore Timbrell, Esq., 10s.

NEWS FROM THE BRANCHES.

Bath.—The Bath Branch has sustained a heavy loss in the death of its founder and President, Mr. Henry Duncan Skrine, J.P., D.L., who passed away on September 26, at the advanced age of 86. It was fifteen years ago that he was instrumental in founding the Bath Branch and till the very end he took the deepest interest in everything affecting its welfare. Every year he gave a reception to the members in the beautiful grounds of Claverton Manor, overlooking the lovely valley of the Avon. Here was a sanctuary for the wild birds and rare flowers which he carefully preserved. But he was the means of preserving rare birds outside of his own valley, for two years ago, when some herons were shot in the Bath Reservoir for feeding on the trout, he wrote to the Mayor and secured the passing of a resolution in the Bath Town Council that henceforth no rare birds should be shot without the permission of the Chairman of the Committee. But not alone does the Selborne Society mourn his loss, but every Society in the neighbourhood whose object is the furtherance of science, education, agriculture and the welfare of the Church. Now he lies in the beautiful God's acre of Claverton leaving behind him a memory *sans peur et sans reproche*, and an incentive to coming generations to persevere in the aims which he ever held dear.

Croydon and Norwood.—The winter season was opened on Friday last by a lecture on "Porriwiggles and other Freshwater Creatures," by Mr. Edward A. Martin, F.G.S., the local Honorary Secretary. The subjects included in the lecture were various animals which are met with in almost every pond and stream in the neighbourhood. A porriwiggle was explained to be what the youths of the pickle-bottle-brigade term "toe-biters," otherwise tadpoles. The metamorphoses of the frogs, toads, and newts were dealt with, and an account given of original observations made during the past summer on these creatures. Sheets of diagrams were distributed, on which were sketched other water-animals, such as the early forms of the common gnat, the great water-beetle, fresh-water molluscs, such as the water-snails, *Limnæa* and *Planorbis*, &c. Specimens of the creatures dealt with were exhibited to the audience. Amongst the announcements at the meeting it was stated that it was intended by the Railway Company to cut down the fine elm trees which now skirt the road at Thornton Heath Station. It was hoped that those interested would obtain a reversal of the decision. A vote of thanks to the lecturer was proposed by Mr. F. Downing, and seconded by Mr. J. A. James, and carried with acclamation.

Hampstead (Northern Heights).—Miss Agnes Martelli, the Honorary Secretary of this Branch, has issued a notice to the members informing them that she regrets that she feels no longer able to act as the Secretary, though still taking a great interest in its work.

Mr. James E. Whiting, of 41, Heath Street, Hampstead, has been appointed

as her successor, with the following Local Committee: Mr. George Avenell, Mr. A. E. Malaher, Mr. Matthew Hunt, Mrs. Martelli, and Mr. Basil W. Martin, F.Z.S.

An arrangement has been made with the Hampstead Scientific Society whereby the members of the Branch will be permitted to attend the meetings of the Natural History Section of that Society. These meetings are held on the second Friday in each month from December to May, at the Hampstead Library, Prince Arthur Road, at 8.30 p.m.

Selborne Saturday Afternoons:—

November 9.—Fulham Palace, by kind permission of the Bishop of London. Meet Mrs. Percy Myles at the main entrance to the Palace, 2.15 sharp (Members only). The Rev. H. P. Cronshaw, Chaplain to the Bishop, has kindly consented to act as guide to the Selbornians. By 'bus or District Railway to Putney Bridge.

November 23.—Natural History Museum, Cromwell Road, S.W. (Mineralogical Department). Meet Mrs. Percy Myles in the Central Hall at 2.15. Mr. L. Fletcher, F.R.S., Keeper of the Department, has kindly consented to give a demonstration on "Minerals."

ANSWERS TO CORRESPONDENTS.

M. S. Nevinson.—*Abelia chinensis*, a most unlikely alien to occur on Leith Hill.

W. J. Greenwood.—*Carduus arvensis*, var. *setosus*, a casual in South Britain. The "proper" form, variety, or sub-species, is the type. In the example you quote, *Orchis latifolia*, there is only the one distinct form, *O. latifolia incarnata*, besides the type.

Mrs. Applebee.—Your plant appears to be *Cuscuta trifolii*, previously unrecorded for North Devon. Did you notice its being yellower, greener or browner in the stem than the commoner species?

M. C.—Possibly your canary died of chill, or of something else, and possibly other oil might suffice to kill the mites by suffocation; but I am still assured that oil of cloves is a useful remedy.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., Richmond, S.W.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, &c., should be addressed to the Secretary, Mr. R. MARSHMAN WATTSON, 20, Hanover Square, W.

Nature Notes:

The Selborne Society's Magazine.

No. 144. DECEMBER, 1901. Vol. XII.

SELBORNIANA.

Richmond Hill View.—It is, of course, a subject for the heartiest rejoicing that—though at an unnecessarily exorbitant price—the Marble Hill estate has been practically secured from the builder, and that without the necessity of any appeal to the munificence of the private donor; but it is by no means yet time to rest on our oars. It is, perhaps, a matter for regret that no assistance is ever to be obtained in this country to such expenditure from Imperial funds; but England has not yet learnt the lesson of the highest greatness of a little country which the King of the Belgians enunciated the other day. It will be well for us to scrutinise very carefully any "arrangements" as to the extinction of common rights on the Dysart estates which may be coupled on to the Bill necessary to secure Marble Hill. The view is, however, already seriously damaged by the row of villas already erected, and is still more seriously affected by the immediately threatened "development" of the Cambridge House river-frontage. Will not some public-spirited man secure this property and dedicate it to the public? It would then be possible to plant a screen of poplars to hide the ugly little red brick villas; and, perhaps, Cambridge House, if retained, might be similarly screened and converted into a museum.

Footpaths.—We have received the following letter from Miss L. Marshall, a valued supporter; but, in view of the very general absence of taste in our public bodies, we hesitate to altogether endorse the writer's suggestions.

"During a summer in the Tyrol, I have been much struck by the work done by different Verschönerungsvereine (answering in some respects to our Kyrle Society) in conjunction with the Austrian Alpine Club. The work is directed by persons of taste and refinement often living in distant parts of Germany. They undertake to make paths and keep them in repair and also to indicate the way to

fine *points de vue*. It is all done very unobtrusively, the paths are generally the natural colour of the soil, while the way is pointed out by slight blazoning of trees and stones: these silent waymarks are most useful where few people are met with, and to those ignorant of the language. The walks vary in length and difficulty, so that those who are infirm can enjoy beautiful spots, secure of smooth paths and frequent seats, while mountain ascents are directed by the Alpine Club. A little book with a map and all particulars can be obtained at places like Madonna di Campiglio and S. Martino in Castrozza. In many beautiful parts of England there are few finger-posts and a sparse population, and where paths are made they are often obtrusive and serve the purpose of advertisement. The various Footpath Societies have done much, especially in the neighbourhood of London: it might be possible that members of the Selborne and other kindred Societies might unite for the purpose of developing certain rural parts of England in this attractive fashion, and at the same time strengthen the hands of those who are fighting the battle of rights of way through country paths."

THE WILD BIRDS' PROTECTION ACT. — We have received the following from Mr. Hiam as to Sunday bird-catching:—

"I understand this is prohibited in some parts of Warwickshire and not in others. It would be interesting to have an explanation. A few Sundays ago I happened to see a man with his nets and cages, and about a dozen goldfinches and linnets just caught, which he had caught on the border of Worcestershire. It appears curious how mixed the law is on this point, and that one man may come on a Sunday morning and clear off all the goldfinches from a neighbourhood which have been a pleasure to watch and listen to. Some time ago the Worcestershire County Council appealed to me on the subject of the protection of wild birds, and I recommended Sunday closing, and an extension of the close time, as the goldfinches breed in September. I have heard nothing further on the subject, so conclude nothing was done in the matter."

At the same time a well-known and active ornithologist, Mr. Oliver G. Pike, in a recent work writes:—

"The Wild Birds' Protection Act is a dead letter as far as all the more rare birds are concerned. . . . Merely putting up printed notices in fields, at railway stations, and in other places is altogether very ineffective. . . . One cannot severely blame those who take the eggs, for these are in many cases mere poor rustics to whom the large rewards offered by collectors is a windfall. . . . Certain professional naturalists and their agents are the chief offenders. I heard of one dealer who wrote to a man living near one of the haunts of that now most rare British-breeding species, the Kentish plover, offering a substantial sum for *every* clutch of these eggs that the fisherman might be able to send. When it is realised that only about twenty-five pairs of these plovers breed in the whole of England during each year, and that this man would have been able to discover nearly every nest, he acted right nobly when he refused to respond in any sense to the proposal. . . . In the event of Parliament declining to interfere, I would like to see our British ornithologists, and all other bird lovers, combine to form a Society for the protection of these rarer birds to which I refer. For an inconsiderable sum of money, reliable watchers could be sent to the nesting grounds of at least twenty of the rarest species. If publicity was given to such a proposal, I am sure subscriptions would be forthcoming."

NATURE NOTES FROM A BATH-CHAIR.

ONE often hears of the "arm-chair naturalist," but possibly the following notes taken from a Bath-chair may show how even an invalid may enjoy Nature.

On May 4, we went to stay at that most comfortable hotel at Trefriw, North Wales, known as the "Belle Vue." For a naturalist it is an ideal spot; with the river and broad valley immediately in front, and the hills and woods at the back, one gets an endless variety of scenery and subjects. There must be a great many more birds to be noted by those who are able to ramble through the woods and over the mountains, but my list shows, at any rate, what may be seen from the hotel and along the roads in a Bath-chair, with the aid of a good field glass. I have divided the list into two classes; first, those actually seen, and second, those only heard, but whose calls or songs are perfectly familiar.

The first day, May 5, yielded goldfinch, chaffinch, greenfinch, house sparrow, starling, blackbird, thrush, mistle thrush, great tit, blue tit, jackdaw, rook, carrion crow, wood pigeon, chiff chaff, swallow, martin, blackcap warbler, robin, swift, wren, pied wagtail, grey (*M. melanope*) or yellow (*M. raii*) wagtail (impossible to be certain which, at the distance), spotted flycatcher, one of the gulls, ring dotterel—seen; and the following, grasshopper warbler, corncrake, pheasant, green woodpecker and cuckoo—heard. The calls or songs of the above are too distinctive to be mistaken, so that, though not actually seen, I may fairly lay claim to include them:—thirty-one, all told, for the first day, to which must be added, for subsequent days, black cormorant, a regular visitor from the coast; siskins, water hens, dunnock, yellow-hammer, lapwing, wheatear, stonechat, and garden warbler; and the following—either tree pipit (*A. trivialis*), or wood lark (*Alauda arborea*), whitethroat (*S. cinerea*), or lesser whitethroat (*S. curruca*), and marsh (*A. palustris*) or sedge (*A. phragmitis*) warbler, impossible at the distance to say which.

Other birds I have noted on former visits, which I have omitted from this list, and there are more I have only caught glimpses of as they flew past, including some of the waders, such as stints, dunlins, &c., but they were away too soon to be recognised. Owls also may be heard hooting at night. However, for a fortnight a total of forty-three is not a bad record under the circumstances.

When confined to the hotel there is a grand old ash tree covered with ivy, which affords endless entertainment, and in whose branches I have seen, almost every day, the following birds, several of which I suspect have nests: sparrow, starling, blackbird, thrush, mistle-thrush, greenfinch, chaffinch, goldfinch, great tit, blue tit, spotted flycatcher, wood pigeon, wren, jackdaw, grey or yellow wagtail and even two swallows.

When you add to this the wild life of the mammalian world, squirrels, otters, hares, rabbits, &c., &c., and the insect world, and plant life, of which unfortunately I know but little, Trefriw is indeed a grand haunt for the naturalist. Owing to the vegetation being fully a fortnight late this year, I had a better chance than usual of seeing the birds. One morning a jackdaw was sitting quietly in the above-mentioned tree, when suddenly and without warning, down swooped a mistle-thrush almost on to the back of the poor daw, who with one vigorous cry of "jack" made a hasty retreat. I can only suppose that he was too near the nest of the mistle-thrush for the latter's peace of mind.

S. B.

Bod Alaw, Llandudno.

REVIEWS AND EXCHANGES.

The Country Month by Month. By J. A. Owen and G. S. Boulger, F.L.S., F.G.S., Editor of NATURE NOTES. A New Edition, with notes by the late Lord Lilford. Duckworth and Co., 3, Henrietta Street, Covent Garden, W.C. Pp. viii. and 492. Price 6s. net.

I think I may safely say that all readers of NATURE NOTES will welcome the new edition of a well-known natural history work, written conjointly by the editor of our own Magazine and the editor of the works of "A Son of the Marshes." Professor G. S. Boulger's "Familiar Trees" will have shown his many readers that with a complete and scientific knowledge of his facts, he yet does not scorn to descend to what is known as popular natural history, and those who have not yet made an acquaintance with "The Country Month by Month," have in this work just such an one as they have been seeking for many a day. The aim of the authors has been to give a practical direction to lovers of nature in their observations, and in this they have undoubtedly succeeded. The book would be a valuable one for all field clubs to study month by month before proceeding on their monthly excursions. The book is full and teeming with information, and when one looks at the index, which, by the by, is excellently done, one cannot but feel surprise at the number of objects and observations which have been brought under notice. At the end of each chapter are added some notes made by the late Lord Lilford on the first edition. The notes are valuable, but the style is not the style of the authors. The binders and publishers are to be commended for the easy manner in which the leaves fall flat when the book is opened, and for the clearness of the type selected for the printing.

E. A. M.

Concerning Cats. By Helen M. Winslow. David Nutt.

A very thorough and altogether charming book, likely to be appreciated not only by cat lovers in general, but more especially by all such as have been graciously permitted tn occupy a humble position in the household, and to live under the kindly if somewhat autocratic sway of her gracious majesty, Queen Puss. That Miss Winslow's pussies and those of her friends happen to be American ones matters little; cat-characteristics—even though the character of one cat may differ from another as widely as those of human beings—remaining much the same in one country as in another; so that the anecdotes of Miss Winslow's pets, their loves and hates, their regal selfishness and entire devotion, their quaint caprices and undying fidelity may easily be confirmed or capped by any reader, who is also a friend and observer of cats, on this side of the Atlantic. Of the chapters on "Cat-Shows," "High-bred Cats," &c., this cannot, perhaps, be said so truthfully: these dealing chiefly with American cats of pedigree and

their owners and patrons; but, as we have intimated, Miss Winslow is nothing if she is not thorough; and seeing that there is an entire chapter devoted to "Cats in England," we, at any rate, have no reason to complain. Nor is the anecdotal part—charming and brightly told as are all Miss Winslow's anecdotes—by any means the chief or the most important matter in this bulky volume of nearly 300 pages. There are chapters on the "Origin of Cats," "Historic Cats," the treatment of cats in disease, even the mode of training up a kitten in the way he should go; the whole being lavishly illustrated with portraits (taken from photographs) of some scores of beautiful or rare specimens of these spoilt children of Nature and gracious companions of our fireside, to whom our greatest living poet has but lately addressed these words of tenderly sympathetic insight:—

"Dogs may fawn on all and some,
As they come.
You, a friend of loftier mind,
Answer friends alone in kind.
Just your foot upon my hand
Softly bids it understand."

We have nothing but praise for this most entertaining and instructive book.

Woodland, Field and Shore: Wild Nature depicted with pen and camera. By Oliver G. Pike. With two coloured plates and 101 photographs of birds, animals, and insects, taken direct from Nature by the author. Religious Tract Society. 5s. net.

Any one who has studied ever so briefly the economy of the poultry-yard must have noticed how a hen having found some delicate morsel of grain or other food hastens to announce her discovery to the whole world within clucking distance. We have, however, been as yet unable to decide whether she does so from motives of the purest and most exalted altruism, or from that superabundant energy to which Mr. Wallace attributes so much in his theory of evolution. Similarly, we are uncertain as to the exact motive which impels each new convert to the most modern development of humane sport—the sport of the camera—to celebrate his achievements in print, whether it be a mere sense of triumph or love of tantalising, such as inspires the angler and the golfer to test their hearer's credulity, or a more laudable desire to proselytise. Whatever his motive, the effect of Mr. Pike's latest volume, with its plain tales of the chase and its most successful pictures, is to make us wish to at once set forth, equipped with a Goerz Trieder Binocular and a Goerz-Anschutz camera with a Thornton-Pickard shutter and an electric release, regardless of any such details as sixty pounds weight to carry, in search of new fields to conquer. One special service which Mr. Pike has rendered us is the demonstration of the beauty and interest that yet remain within the limits of the now much minished county of Middlesex. We have, on another page, quoted some of the conclusions at which he has arrived as to the Wild Birds' Protection Act, and our space here only permits us, while thanking him for this cheap and beautiful volume, the coloured frontispiece to which is a triumph of printing, though the pictures of insects are not as satisfactory as those of birds, to add two words of criticism. Firstly, we altogether dissent from the use of the word "animals" in the title, as opposed to "birds" and "insects," where "beasts" is meant; and, secondly, we presume that the "tall hollyhocks" that "are everywhere dotted about" in a Middlesex copse, "covered thickly at the bottom with red cone-shaped flowers," must be foxgloves.

Voices of Nature and Lessons from Science. By Caroline A. Martineau. Second Edition. Sunday School Association. 1901.

We are not surprised that this exceptionally excellent little work has reached a second edition, and the very limited amount of fault-finding of which we find ourselves capable must be taken as simply suggestions for the third. The whole trend and object of the work, some chapters of which were originally written for the Natural History Club of the Morley Memorial College—lucky club—are distinctly and directly ethical. Miss Martineau is not content to write parables, like Mrs. Gatty: she does not hesitate to draw out her moral at length, to give us, in fact, lay sermons; but her science is not merely illustrative, as in the late Professor Drummond's *Natural Law in the Spiritual World*, it is expository. So

many popular moralists, with the best intentions in the world, give us mere travesties of the teachings of science that it is quite refreshing to come across so accurate a work as the present. Pure physics—the doctrine of the conservation of energy—is drawn upon, as well as geology and biology, and we have only found three little matters to which to take exception. Speaking of "carbonic acid," Miss Martineau writes, "Can we thus pull it to pieces? No, neither you nor I, nor any animal can do this, but it is the work of plants. It is washed into the ground by the rain, and their roots drink in the rain and carbonic acid together, then their leaves pull it to pieces by the help of the bright, warm sunshine." This suggests the erroneous notion that plants depend for their main supply of carbon dioxide upon their roots, rather than upon their green parts. Again, though we know no birds till long after the Carboniferous age—and, for that matter, no sloths either—it is no longer true to say, as the writer does on p. 98, that there were then "hardly any insects." Nor can the spines of the sweet chestnut be accurately described as "hooked" (p. 106). Considerations of space alone prevent the quoting an excellent passage (pp. 117-120) on the relation of the Darwinian theory to unselfishness and the care for the sick, which we do not remember to have ever seen so well stated.

Received.—*The American Botanist* and *The Fern Bulletin* for October, *Science Gossip*, *The Naturalist*, *The Naturalists' Journal*, *The Irish Naturalist*, *Humanity*, *The Animal World*, and *Our Animal Friends* for November.

NATURAL HISTORY NOTES AND QUERIES.

A Dog Story.—A clergyman told me the following story of a dog, which he said I might use. One day his younger brother and he had been skating on a pond at Eton, when they were accosted by a suspicious looking tramp, who begged, and as their manner is, persecuted them, taking advantage of their being helpless. They were so frightened that they hurried off their skates as soon as possible and retreated homewards, followed by the cowardly beggar. Fortunately, perhaps, for them, their Scotch terrier dog had come to their aid: he kept the enemy at bay until they escaped into their own front door. They were relating their adventures to their father when the doorbell rang violently, and the tramp was there demanding in angry tones compensation for his trousers, which the dog had torn. He was soon put to flight with threats of the police. The boys now remembered they had left their skates at the pond, and ventured out again to find them. But where was the dog? He was nowhere to be found, so they went alone. They came to the spot, and to their astonishment they saw their faithful and intelligent friend guarding their skates in triumph.

To which class does this dog belong, to the dualists or the monists, to those who say that intelligence and reason are not of the same nature, or to those who say that the one is only a lower form than the other?

Moorcroft, Hillingdon, Middlesex, C. J. MAURICE.
November 9, 1901.

Curious Instinct in Rabbit.—When crossing a field with a companion, we saw a rabbit running directly towards us from the direction of an enclosed plantation, about one hundred yards distant, where the game is preserved. It continued running until quite close to us, though at no great speed, and as if half paralysed with fear. We then saw it was chased by a weasel. We allowed the rabbit to pass within a few yards of us, and then "headed off" the weasel, which was very unwilling to give up the chase. It is curious that exactly the same thing happened in the adjoining field about a year ago, and it seems the rabbit must have run straight towards human beings for protection, as under ordinary circumstances it would have fled from us.

W.

Hedgehog Killing Poultry.—I was much interested in Mr. F. L. Rawlins' note on this subject in the November NATURE NOTES, since my statement in the *Fauna of Shropshire* that I had had two hens killed whilst roosting

on the ground, by hedghogs eating into the soft parts of their bodies, has been regarded in some quarters as incredible. It is perhaps hardly necessary to state that unless convinced of the fact I should not have ventured to commit it to print. Similar incidents have been recorded in the *Field*, and the *Zoologist* (1886, p. 457). Last May a gentleman who has had much experience in rearing pheasants in the south of Scotland told me in the course of conversation, and without any hint that I was interested in the matter, that he had twice found sitting pheasants killed on the nest by hedgehogs which had attacked them, not on the head or neck (as a stoat or rat would), but in the horrible manner suggested above. After this I think we may say that—incredible as it may seem—the fact is well proven: the hedgehog is "Guilty."

Shrewsbury, November 5, 1901. H. E. FORREST.

Boxes for Birds.—At the beginning of March I placed in my garden a number of boxes for birds to nest in, with an entrance hole in one corner near the roof, so that when sitting on their nests the birds should not see and be disturbed by what went on below. A stick was fastened to each box to serve as a perch, and they were fixed on tree trunks ten or twelve feet from the ground. By the first week in April every box was appropriated by sparrows, which sat in pairs on a stick, and amused themselves by going in and out of the box and driving all other birds away. The boxes not being intended for the education of young sparrows, I determined to eject them; but how, was the question, unless a gun were used, which would terrify every bird on the premises, and drive many away. Placing the boxes six feet from the ground proved a remedy, but it is too low down for nuthatches and wrynecks, which I especially wanted to encourage. The most effective plan has been the lessening of the hole, till just large enough to admit the thumb. This was done the middle of April, and the perseverance of the sparrows in their attempts to get in by the reduced entrance was most amusing. For three weeks they made fruitless endeavours to squeeze through holes by which different kinds of tits passed into the boxes without the slightest trouble. Sparrows have not the same power of entering holes as birds that habitually nest in such places. They require space to grasp the hole with their feet as they enter, and prefer one large enough to perch in, while tits and nuthatches pass readily through any space that will admit their bodies. The effect of the sparrows' pertinacity has been to keep several of my boxes untenanted. It is, however, the first time I have erected any, and next year the broods of those birds that have been successfully raised will be on the look out for similar quarters near their old home. I have come to the conclusion that perches on boxes are a mistake, and shall remove the sticks. They are only an encouragement to sparrows. Tits fly straight to the hole, and nuthatches do not require them, nor do any of those birds that habitually nest in holes.

Market Weston, Thetford. November, 1901. EDMUND THOS. DAUBENY.

Strange Nesting Places.—Perhaps you may think one or two more of these worth recording. I once found the nest of the great tit in the super of a disused bee hive, while in the stock hive underneath was a strong wasps' nest in full swing. The heat in the hive was so great that the eggs all dried up instead of hatching. I took them after they had been incubated for a month and found the yolks rattling about inside them like small marbles. Another was built in a private letter box, and I found the bird sitting on the nest with a letter and two post cards lying on her back. I took one egg, and on visiting the nest again in four days' time, found that three more had been laid. They were duly hatched and the brood flew. Another pair of great tits made persistent attempts to build in a pump which was in daily use in a garden belonging to some friends of mine. On three successive mornings they pumped out part of a nest, the work of the previous day, and on the fourth morning they pumped out one of the birds as well. After such very rough and inhospitable treatment, which unfortunately could not be helped, as it was necessary to use the pump, the poor things at last gave up the attempt in disgust.

Lyminster, Arundel. W. S. CLEATHER.

The eccentricities of tits are certainly remarkable. At a little country place which I have, a pair has for at least three years past reared and fledged a brood

in a disused letter box, standing on a post close to a public road. The nest is a model of snugness and warmth, constructed of moss and lined with rabbits' down, which must have been brought from a wood half a mile away. The slit is barely half an inch wide, through which the birds come and go. For more security I have moved the post and box into the garden close by, and shall be interested to see if it is again inhabited next year.

Folkestone, October 7, 1901. A. L. HUSSEY.

Plovers and Curlews.—The writer of the note under this heading in the October number of NATURE NOTES says, "The plover is not given to forsaking her nest, but will lay like any barndoor fowl." I presume the latter part of the sentence is not to be taken literally, for it is a well-established fact that plovers (*Vanellus vulgaris*) rarely, if ever, lay more than four eggs at one nesting. I have always found plovers' nests to be deserted, on revisiting them a few days after having removed either one or two eggs and have never found what is known as a "forsaken egg" in any plover's nest from which I had previously taken eggs. On the other hand, robins will often lay the remainder of their eggs, after one or two eggs have been removed and the nest left empty, and I once found one sitting on two eggs in a hole, out of which the nest had been taken and thrown down close by. Having removed all the eggs from a mistle-thrush's nest, viz., two, I went, three weeks afterwards, to see whether the birds had forsaken, but was rather surprised to find two young ones in the nest.

Five or six years ago large flocks of plovers were to be seen in this neighbourhood during the autumn, but there are not so many now. Some of the readers of NATURE NOTES may hint that if there are many persons like the writer in this district, the diminished number of plovers is easily accounted for. In reply, I may say, the above notes are taken from the diary of my younger days, before I became a reader of NATURE NOTES.

Leek, Staffs, November 7. ROBERT HALL.

Robins' Eggs—White variety.— During the last few years I have examined a large number of robins' nests, and without exception I have observed that one egg and occasionally two out of the clutch have a much lighter appearance than the others, which is due to their being more free from spots than the remainder of the clutch. The explanation is, I think, that the lighter coloured egg is laid last and that the colouring matter has got used up. I have several times found whole clutches of eggs of a pure white colour. It is possible that robins have not always made their nests in holes and that at one time the colouration was protective, but now that in most cases the eggs cannot be seen without some obstacle being removed, they are gradually losing their colour.

The wren's (*Troglodytes parvulus*) nest being dark inside, their eggs are less spotted than the willow wren's (*Phylloscopus trochilus*) whose eggs can often be seen as they lie in the nest. The kingfisher, sandmartin, and other birds whose nests are quite dark have pure white eggs.

Leek, Staffs, November 7. ROBERT HALL.

Robins (pages 73 and 174).—As I live in a favourite haunt of these birds, and have many opportunities all the year round of observing their habits I was greatly interested in the notes kindly contributed by your correspondents on the pages quoted above. Since reading the notes I have kept a sharp look-out for a robin *v.* robin fight, and this morning (October 24) was rewarded for my trouble. I saw a robin chasing another robin until, I presume, the weaker one could not escape its pugnacious aggressor by flight, so alighted upon the ground to better defend itself, and there a furious battle ensued for a few minutes, between the two. I went forward when I saw one had got much the worst of the battle, whereupon the conqueror took to its wings and flew away apparently not much the worse for the fray, but not so the vanquished; it lay upon the ground with outstretched wings, drooping head and gaping mandibles. I picked the poor sad looking little bird up and it expired soon afterwards, killed in a robin *v.* robin fight. WALTER FIELD.

Swallows and Martins.—The main body of the swallows and martins in this neighbourhood seem to have taken their departure unusually early. By

diligent searching yesterday (October 7) I could only discover a single specimen of the chimney swallow, which, from its powerful flight, seemed perfectly fit to undertake the usual trip across the ocean. Last year a straggler of the same species was flying near this house on the morning of November 4. The main body this year had taken their departure from the neighbourhood by the end of September. The chimney swallow has occurred here in average numbers, but the house martin has been decidedly scarce.

Fyfield, near Abingdon. W. H. WARNER.

Late Swallows.—To-day is the King's birthday and we have two swallows flitting about here enjoying this celebrated day. This is later than I have recorded the date of last seen before.

St. Helen's, near Hastings. WALTER FIELD.
November 9, 1901.

Skylarks.—Mr. Walter Field's interesting notes on this, my favourite songster, in the November issue, are duly noted. In reply to Mr. Field's enquiry, I have never noticed the skylark mimicking the cry of the ringed plover. Of course we have none of the latter birds in Hertfordshire, and thus my opportunities for noticing this interesting occurrence have been *nil*. It is so exceptionally interesting, however, that any observations from those Selbornians resident in the neighbourhood of ringed plovers and skylarks would be very welcome. I have noticed, however, a similarity between the songs of the lark and the goldfinch. Has any other observer been struck as to this? One hears with much satisfaction of the increase of such a joyous minstrel as the lark, whose minstrelsy in all weathers is one of the chief bird delights of the country.

St. Albans, Herts. W. PERCIVAL WESTELL, M.B.O.U.
Nov. 4, 1901.

Bird Superstitions.—In your current issue, Mr. Arthur Harvey, writing on the above subject, speaks contemptuously of the belief that the swan sings in dying. I was under the impression that the domesticated English swan (*Cygnus olor*), was notoriously mute, but that the wild swan (*Cygnus musicus*) certainly sings with a beautiful voice. As regards the belief that it sings *when about to die*, Mr. Harvey can hardly have read the affecting comparison of himself by Socrates (in the *Krito*), to the dying and rejoicing swan, going home to his God, Phœbus. It is, at all events, a very ancient and very lovely legend, and I should be thankful to any of your readers who would adduce such evidences as may be forthcoming for the wild swan's death song. I write with a little special interest on the question, as a member of a family which has borne two swans on its shield for at least four centuries, and the motto "*Moriens canto*" in allusion to them.

Hengwrt, Dolgelly, N. Wales. F. P. C.
November 5, 1901.

Lizards in Ireland.—I should be obliged to any of your correspondents who would give us information respecting lizards in Ireland. I caught (and released) one in a park in Co. Dublin some fifty years ago, but on mentioning the fact to Charles Darwin, he told me to beware of talking of it to any other man of science, as none would believe me. Nevertheless, I read in "British Reptiles" that in Co. Down, about that period, there were a great many. The creature I saw and handled, which moved very slowly, was nearly the colour and length of my dog-skin glove with its gauntlet. F. P. C.

Toads.—In reference to the late correspondence on toads, I should like to mention that we have had a large foreign toad for eleven years, and have always handled it freely and fearlessly, and have never suffered from any poisoning.

E. G. W.

Palmate Newt.—Is the palmate newt (*Molge palmatus*) to be found in Berkshire? So far, this county is one of the many from which it has not yet been recorded. As is well known, this is a very local species, but there is little doubt that if our observers would pay more attention to this amphibian we should be able to add other counties to those already known.

Blenheim Villa, 61, *Clova Road*, J. LEONARD MONK.
Forest Gate, E.
November 2, 1901.

The Convolvulus Hawk Moth.—This insect has been extremely plentiful in this district this year. One gentleman took eighteen in a small garden situated in the centre of the town of Littlehampton, and I hear reports of captures from Chichester, Bognor and Emsworth. The specimens were nearly all found feeding on the flowers of the tobacco plant.

Lyminster, Arundel. W. S. CLEATHER.

The convolvulus hawk moth has been more abundant this year than in any other in my experience. At Lowestoft, on October 7, I saw one hovering round an electric lamp. It then settled on the esplanade, and was captured by a young man who informed me he had taken one the evening before. A neighbour tells me of numerous captures of this sphinx while hovering over the flowers of tobacco plants. I am no longer a collector, but think that many a hawk moth might be taken by keeping watch over the flowers of tobacco plants in the evening.

Market Weston, Thetford. EDMUND THOS. DAUBENY.
November, 1901.

Wood Leopard Moth.—In the latter part of September my attention was drawn to a pear-tree in my garden, which has not borne any fruit this season. In the trunk of the tree I discovered a small circular hole, and by inserting a thin twig, I found it to be about three or four inches in depth, the cavity running upwards. Upon closer scrutiny I found two more holes of a similar character, and protruding from one of them was the skin of a caterpillar. A few days later, I happened to see a wood leopard moth (*Zeuzera æsculi*) at rest on the same tree. The creature did not attempt to fly when I picked it up, and seemed to be in a sleepy state. "Cassell's Natural History" tells me that the caterpillar of this moth infests apple, ash, and other trees.

2, *Canonbury Place, November* 8. CHAS. E. J. HANNETT.

Holly Blues.—Referring to W. F. Kirby's note on page 217, the holly blue occurs fairly regularly in two broods here. I have caught twenty this year in the garden, flying round or settling on the hollies. The hollies are fine and plentiful.

Leylands, Wotton, Surrey. R. BROOKE.

In answer to Mr. W. F. Kirby's notes on the holly blue butterfly, I may state, that when I was down at Upper Dicker, Sussex, during the first week in August last, this butterfly was common in that neighbourhood.

Carlton House, Herne Hill, S.E. RALEIGH S. SMALLMAN.
November 6, 1901.

Flies?—It has been a familiar sight to me in Upper Wharfedale to see a grey mass of midges dancing over the top of the fir trees at the time of day when the atmosphere was congenial to their aerial sports. At other times these insects lie close about the branches of the trees until disturbed, and then life becomes a burden to anyone standing near. The midges in this locality sometimes swarm to such an extent that horses become too restive to stand, men are driven from their outdoor labour, and I have seen a child leave the attractions of the hayfield in tears owing to the relentless persecution of these minute pests.

E. G. WOODD.

The letters which have been appearing under this head remind me of an incident related to me many years ago by the then vicar of Aylesbury. One summer afternoon he noticed (as he thought) smoke issuing from the lead-covered dwarf spire which surmounted his church tower. In a state of consternation he at once proceeded, accompanied by his verger, to investigate. Searching into every possible nook and corner *en route* they at length reached the summit of the tower without having come across any sign of fire, or smell of smoke. Here they paused to deliberate, and, while so doing, happened to notice the flies, which were basking in innumerable quantities upon the lead of the spire, suddenly rise in a dense cloud, and after a short flight, resettle. They watched this manœuvre repeated several times at short intervals, with the result that they retraced their steps feeling satisfied that they had discovered the harmless nature of the "smoke," but not without feeling something akin to chagrin at having been so completely taken in by a swarm of flies!

The vicar's theory was that the action of the sun rendered the lead unbearably

hot for the flies, and that they resorted to these short flights, which had caused him such consternation, in order to cool their feet!

Sidmouth, November 6, 1901. WILL V. VICKERS.

From the answers, including one from myself, in your issue for November, it would be difficult to decide whether Mr. New saw gnats or ants. Allow me to plump for gnats. I had a convincing proof last year. On two trees from 20 to 25 feet above my head, I watched what were unmistakably gnats swinging to leeward in the breeze. They were not ants or flies. A cloud of ants does not look at all like what Mr. New aptly describes as "a short thin line of dark vapour which lay horizontal and pennant-like" at the top of a tree, "in the direction away from the wind." Ants have not sufficient powers of flight to assume such a formation or retain such a position. Their flight is feeble, like a shapeless cloud that soon scatters and disappears. They do not play about for hours in the same spot as gnats do.

One still autumn day I noticed the ants, in twenty nests or so, swarming between 3 p.m. and 4 p.m. on my lawn. They were flying aimlessly about in all directions to the great joy of the birds, but not in any formation such as Mr. New describes. At 5 p.m. the excitement in the nests and the air around was all over, and hardly a winged ant was to be seen. They had probably discarded their wings and returned to mother earth.

Market Weston, Thetford. November, 1901. EDMUND THOS. DAUBENY.

House Fly.—Is anything really known about the history of the common house fly in its larval existence? Sometimes we read and are told that its maggot feeds on offal or dung. Has any one seen these maggots and succeeded in rearing them? I have my doubts.

Market Weston, Thetford, November, 1901. EDMUND THOS. DAUBENY.

Wasps (p. 198).—"A Rugby Selbornian" tells us he saw a fly get away from a wasp, apparently none the worse, after being stung three times. Wasps are great devourers of flies, and a struggle between a bluebottle and a wasp frequently ends in the fly's escape. During the combat the wasp may attempt (generally unsuccessfully) to cripple the fly with its sting; but it tries most of all to secure its victim by biting off a wing. In the case alluded to a doubt may arise as to whether the wasp drove its sting sufficiently far home to inject the poison. Were it to succeed in so doing I think the fly would succumb at once.

Some of our British wasps feed their grubs on caterpillars or spiders, which they paralyse by stinging. The poison does not cause death, but it destroys all power of escape, and probably would have this effect on a bluebottle. The honey bee kills off the drones by stinging them. A fly is not so easily pierced with a sting as a caterpillar or a spider, or a fat lazy drone.

Market Weston, Thetford, November, 1901. EDMUND THOS. DAUBENY.

Wasps and Bluebottle Flies.—A "Rugby Selbornian" asks on p. 198 if it is a common coincidence for a wasp to release a blow-fly after stinging it, I should say it is a rare occurrence for a fly to get away once in a wasp's clutch; for this reason butchers look on wasps as friends to some extent. Wasps rasp off bits of meat and carry to their nests. It is very interesting to get a colony of wasps in a glass case and suspend the nest, giving access of course, and watch the variety of food brought in. There is no disposition to sting one, if the nest is not disturbed or shaken. Wasps have been very numerous this season and very troublesome in houses, shops, &c. I was passing a confectioner's shop a short time ago and seeing what a trouble they were to the shopkeeper I closed the door and drove all into the windows and as they could not escape I set to and killed 360 by simply gripping them across the thorax with finger and thumb, and I was informed that 100 had been killed in the windows before I set about them and some hundreds the day before. I have come across nests of a species of wasp that I think is fresh, as the nests were built on banks *above ground* in grass. They were quite yellow in the forehead or face.

Ashwood Bank. J. HIAM.

SELBORNE SOCIETY NOTICES.

The Selborne Society was founded in 1885 for the preservation from unnecessary destruction of wild animals and plants, the protection of places and objects of antiquarian interest or natural beauty, the promotion of the study of natural history.

Membership of the Selborne Society.—With a view to obtaining the co-operation of persons in all conditions, there is no fixed subscription, but those only who subscribe 5s. per annum, and upwards, are entitled to hold office, vote at meetings, and to receive the reports, the Society's Magazine (NATURE NOTES), and other publications of the Society. Subscriptions commence from the 1st January in each year, but persons joining after that date are supplied with the back numbers of the magazine. A cheque or postal order for the amount of the subscription or donation, crossed "London Joint Stock Bank, Pall Mall," should be addressed to the Secretary, Mr. R. MARSHMAN WATTSON, 20, Hanover Square, London, W.

Council Meetings.—The next meetings of the Council will be held on Tuesdays, December 3 and 17, and January 7, at 5.30 p.m., at 20, Hanover Square, W.

New Members.—Geo. Andrews, Esq., Shoreditch; Mrs. O'Rourke, Stroud Green; Mrs. A. H. Phillips, Sydenham; Miss A. M. Drinkwater, Crooksbury; H. A. Lewis, Esq., Bristol; Wm. G. Jefferys, Esq., Mill Hill Park.

Donations and Subscriptions.—The Council begs to acknowledge with thanks the receipt of the following donation:—M. Pole, Esq., 10s.; and the following subscriptions over 5s.:—Mrs. Mort, £1; Lionel E. Taylor, Esq., 10s. 6d.

Selborne Saturday Afternoons:—

Past.—*October* 23.—At the Royal Botanical Society's Garden in the Regent's Park, a party of over twenty were, by the kindness of Mr. Sowerby, the curator, conducted over the garden and houses by Mr. Higgins, one of the head gardeners, a most instructive afternoon being thus spent.

November 9.—At Fulham Palace a party of over thirty assembled and were escorted by the Rev. H. P. Cronshaw, Chaplain to the Bishop, over the Palace and Chapel. After a visit to the historic garden the party was entertained at tea by His Lordship the Bishop, who gave them a brief but cordial welcome.

Future.—*December* 14.—Natural History Museum, Cromwell Road (Botanical Department). Assemble in the Central Hall at 2.15. Guide, Professor Boulger, F.L.S., F.G.S.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., Richmond, S.W.

5. For the supply of the Magazine to others than members address the publishers, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-89, Great Titchfield Street, London, W.

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